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**REFERENCE**  
**M4A3E8**  
**"EASY EIGHT"**  
**SHERMAN**

# Model MILITARY INTERNATIONAL

Issue 119 March 2016  
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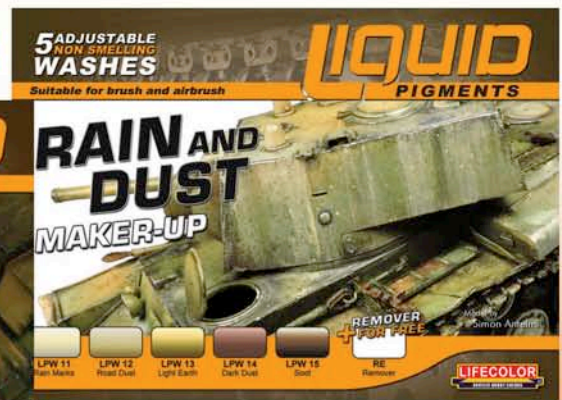
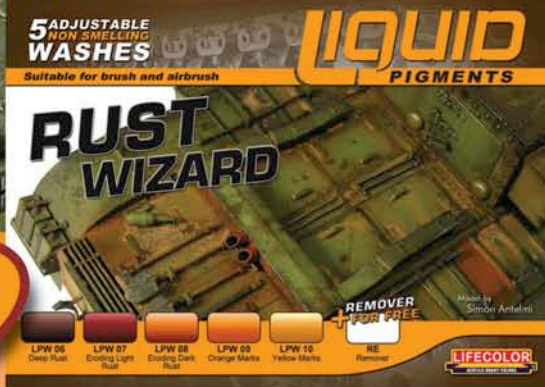
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ISSN 1749-8864





## PHOTOS OF TAMIYA'S NEW 1:35 SU-76 AND MORE NEW RELEASES



**W**e have new photos of Tamiya's forthcoming 1:35 scale Su-76M self-propelled gun, which includes crew figures. This is an all-new kit.

Tamiya has also supplied information about one of their upgraded re-releases. This model takes the 1988 Italeri 1:35 scale model of the M107 and brings it into the modern era.

The kit includes new and updated parts from the Italian maker, plus Tamiya figures, accessory parts, decals and instruction manual, all packaged in a new Tamiya box.

The M107 story starts with its development from 1956; this self-propelled gun had a compact vehicle base and elongated 175mm-caliber gun barrel that gave it an impressive maximum range of 32km. Some 524 were produced between 1965 and 1980, notably serving in the Vietnam War.

We will have more information and reviews of both these new releases as they come to hand.

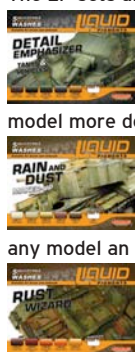
Thanks to Tamiya for the information and images [www.tamiya.com](http://www.tamiya.com)

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

## LIFECOLOR LIQUID PIGMENTS

The Airbrush Company Limited has announced the arrival of the new Lifecolor Liquid Pigments, a variety of weathering paints made with the new Green Chemistry pigments suspended within the fluid. They come in three main sets made up of 5 adjustable washes and a remover, that can be used to subtract the pigments once applied. This feature is unique as it gives you ultimate control over the pigments, allowing you to work with high precision and detail.

The LP sets are as follows:



- Detail Emphasizer designed for Tanks and Vehicles, this set has the darkest colour range out of the three and will help give any model more depth and incredible detail.
- A Rain and Dust set includes lighter colours to create natural effects such as rain weathering / residue and aging with dust, giving any model an extra touch of realism.
- The Rust Wizard set provides deep, warm colours to deliver rust effects on models.

All of these paints are available as individual pots including the remover, which comes free within the set.

Thanks to The Airbrush Company Limited for the information and images [www.airbrushes.com](http://www.airbrushes.com)



## 2016 North Somerset Modellers Society Model Show and 2016 Plymouth Model Show

The 21st annual show North Somerset Modellers Society Model Show will be held on Sunday 3 July for the second time at:  
The Helicopter Museum  
Weston Heliport  
Locking Moor Road  
Weston-Super-Mare  
North Somerset  
BS24 8PP  
From 10am to 5.30pm. See the Museum website for a admission charges.  
Free parking, Restaurant, Helicopter Flights, and a raffle for a Helicopter Flight.  
For more information please contact: John Annegarn on 01934417742 or [john.annegarn@sky.com](mailto:john.annegarn@sky.com)

### BZ-38 REFUELLER Mod. 1939



### U.S. AMMO-LOADING TANK CREW



### 7.62 cm FK 39(r) GERMAN FIELD GUN



### ZIS-5 Family Wheels Set



## MINIART NEW RELEASES

MiniArt has sent information and images of four new releases:

**BZ-38 REFUELLER Mod. 1939**  
Kit No. 35158. 651 parts.

**U.S. AMMO-LOADING TANK CREW**  
Kit No. 35190. 64 parts. Box contains five figures and accessories.

**7.62cm FK 39(r) GERMAN FIELD GUN**  
Kit No. 35104. 266 parts. Box contains models of gun 7.62cm & four ammo-boxes with shells.

**ZIS-5 Family Wheels Set**  
Kit No. 35196. 62 parts. Box contains models of wheels.

The 2016 Plymouth show will be held on Saturday 2nd April 2016 at the usual venue, Plymouth Guildhall between 10.00am - 4.00pm.

A number of clubs and traders have already confirmed attendance and it is anticipated that this will be their biggest show to date.

Disabled access is available.

Further details can be obtained from: Ian Chanter, 01752 212676 or by email on [ian.chanter@blueyonder.co.uk](mailto:ian.chanter@blueyonder.co.uk)



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The soft ground encountered in the Autumn of 1944 led to the practice of improving the Sherman's flotation by widening the tracks using extended end connectors (EECs), seen here on a sandbagged 14th AD M4A3 (76) in Niederbetschdorf, France, January 1945.

## M4A3 (76mm) HVSS – “Easy Eight”

Bruce Culver explores the development, deployment and effectiveness of the improved M4A3 (76mm) HVSS, commonly referred to as the M4A3E8 “Easy Eight” Sherman

**E**ven before the M4 and M4A1 medium tanks entered service in 1942, the Ordnance Dept. was working on improvements to the breed. Many of these reflected initial reports from training units, others were simply mechanical or design changes meant to improve the tank's fighting ability. One M4A1 was fitted with a 76mm T1 gun in the original turret, but this was dropped due to too little space inside the turret for efficient operation. A number of other improvements were assessed as the Allies gained combat experience with the M4 medium tanks, now named “Shermans” by the British.

### THE STANDARD TANK

In mid-1943, the Armoured Force decided the M4 medium was the tank that would fight the coming European and Pacific campaigns, and major efforts to improve the combat effectiveness and survivability of the type were needed. There was a realisation in assessing combat reports that the original hulls of the M4 series had some weak spots in the armour layout, and that the forward drivers' hatches were too small for quick exits in case of fire, although the location over the seats was good. There was also concern about the vulnerability of the ammunition bins in the sponsons and resulting fires when the tanks

were hit in the side. Simplifying production was also a necessary consideration, and in July 1943, work on the new hull design began.

### IMPROVING THE BREED

The major task was to revamp the hull to better protect the ammunition and improve the driver's and bow gunner's access with larger overhead hatches. The ammunition bins were moved from the sponsons to spaces below the floor and the rounds were held in bins with jackets filled with water to prevent red-hot shell fragments from igniting the propellant. In winter, the water was treated with ethylene glycol antifreeze and rust inhibitors. The provision of larger

front hatches required a complete redesign of the glacis and forward hull roof. In place of the original glacis assembly of 2" (51mm) thickness at an angle of 57°, the new hull has a glacis of 2½" (63mm) thickness at 47°, providing about the same level of protection and simplifying production, since the complex glacis assembly with protruding drivers' hoods was no longer needed.

It was also realised that in some situations the M3 75mm L/40 gun was less effective than anticipated, and although there was no demand from US armoured divisions for a 76mm gun for the M4 series, Ordnance started the development of a new gun and turret. The





US Ordnance started developing a horizontal volute spring suspension (HVSS) to allow using shock absorbers that couldn't be fitted to the earlier vertical volute spring suspension (VVSS). This is an M4E6 fitted with an early HVSS design and a T23 turret and 76mm M1 gun. Note that only the first and last bogies have shock absorbers fitted.



This M4A3 (76) HVSS, later often called the M4A3E8, shows the final production type of HVSS bogies, all now fitted with shock absorbers. The new suspension used a new 23" (584mm) track which reduced the tank's ground pressure to less than the Panther's.



The new HVSS and 23" tracks were introduced in production and some early HVSS-equipped tanks, like this one from 6th Armoured Division seen in Holland, had earlier details like the M1A1 76mm gun without a muzzle brake and a gun-ring hatch for the loader. This tank has the T66 tracks used on most early M4A3E8s.



This M4A3E8 of 4th Armoured Division was photographed near Bastogne in January 1945. Like most early "E8s", it has T66 single-pin tracks, but a later turret with the oval loader's hatch and the M1A2 76mm gun with a muzzle brake. 4th AD often painted out the white stars with black paint to reduce their visibility to German gunners.



Another M4A3E8, this one from 6th Armoured Division, shows a common modification, additional crew stowage. Part of the original sand skirt has been used as a bin above the mudguard, and a pipe across the bow could hold sandbags or additional stowage. Added rails on the turret were also very common, as there wasn't enough room inside the tank.



Even with the wider tracks and HVSS, the spring of 1945 was wet and the ground could become a quagmire. Logs were commonly used for un-ditching, as seen on this M4A3E8. Note the .30 Browning LMG for the tank commander added to the front turret roof.

76mm T1 had a long L/58 barrel and it was thought this would foul foliage and buildings in use, so the barrel was cut down by 15" (380mm), reducing its penetration performance by 10%, a loss that would later be significant.

#### MODIFIED TURRET

Ordnance came up with a modified turret from the experimental T23 medium tank that mounted the production version of the T1, the 76mm L/53 M1 (or M1A1). The M1

had a plain barrel while the M1A1 had the muzzle threaded for a muzzle brake, though these were not fitted to most early examples. The turret of the T23 had the same turret ring diameter as the earlier M4 and was added to the new "large hatch" 47° hull, producing an "ultimate", or second generation, configuration of the M4 family. The M4 with the new hull was reserved for mounting the 105mm howitzer as a support tank, and only the M4A1, M4A2

and M4A3 models mounted the M1 76mm gun in WW2 service.

The revisions increased the weight of the basic gun tanks by 3800 lbs (1727kg) for the M4A1, 3200 lbs (1455kg) for the M4A2, and 4400 lbs (2000kg) for the M4A3. In addition to loading the power train, the added weight seriously reduced flotation in soft soil conditions, and the 76mm tanks were more prone to bogging down in soft ground than the lighter 75mm models. This problem

became serious after the summer battles in Normandy after the D-Day landings - the rains in the early fall made the cross-country performance of the M4s worse, while the German Panthers with their wider tracks generally had a better time of it.

An Ordnance expedient was the use of extended end connectors (EECs) to extend the 16 1/4" (420mm) tracks by 4" (100mm). As many tanks were fitted with added "soft" armour like sandbags ▶





# Think Tank - M4A3 (76mm) HVSS

and even concrete to improve the armour protection, the flotation problems became more serious. Many Sherman crews also stowed far more than the planned ammunition supply inside the vehicles, adding to the weight growth. As a result, the use of EECs in Europe became a standard practice. Such was the need that besides the wide rectangular EECs manufactured in the US, several European manufacturers were contracted to make thousands of them to fit on older US tanks and the Allied Shermans in service in the European and Italian theatres of operations.

A parallel proposal was for a horizontal volute spring suspension (HVSS), which had the advantage over the standard vertical volute spring suspension (VVSS) of allowing the installation of shock absorbers, which the VVSS design could not accommodate. These were first installed on two M3 medium tanks in 1942, but since they used the standard 16" (420mm) tracks with outside guide horns, there was no immediate advantage to spending the resources to retool for the new suspension, and the M4s continued in service with VVSS and the standard tracks.

Initial service in North Africa, Sicily and Italy did not show the tracks and suspension to be inadequate. Most of the African desert was fairly firm ground and adequate flotation was not a concern. Sicily and Italy were largely hilly and formed largely from limestone and granite, and except for local areas of soft ground, steep grades were more of a problem than soft or muddy ground during the initial landings. During the rainy seasons, however, much of Italy became an impassable quagmire, and roads torn up by thousands of trucks and tanks were often nearly unusable, even to the Shermans in that theatre.

## IMPROVED HVSS

A second HVSS design, improved from the first one, was initially installed on pilot models in September 1943, the same month

as the landings in Italy at Salerno. This new design was intended to be used with a new wide track using centre guide horns. The first track used was the T66 single-pin type, 23" (584mm) wide. An additional advantage with this layout was that road wheels could be removed easily to the side without raising the wheels to lift them over the guide horns. This design was accepted for service in March 1944 - the Ordnance Committee released the new HVSS suspension for use on all M4 models. It was fitted to most M4 family tanks built after August 1944, and these began arriving at front-line units in December 1944, during the Battle of the Bulge.

## M4A3 (76MM) HVSS

Officially designated "M4A3 (76mm), HVSS", the new model of the M4A3 was chosen to be the standard type, and was the version kept in service after the end of the war. It was often referred to as the "M4A3E8" as the HVSS suspension was the "E8" project designation. It was a vastly different tank from the initial M4 and M4A1 models that had first seen action in October 1942 with the British at Alamein. The Ford GAA V-8 engine had been developed as a 12-cylinder aircraft engine but was not successful in that role, so Ford reduced the cylinders to 8 and modified it to be a tank engine. It produced 450 HP, providing the M4A3 with good mobility, and was also reliable in service.

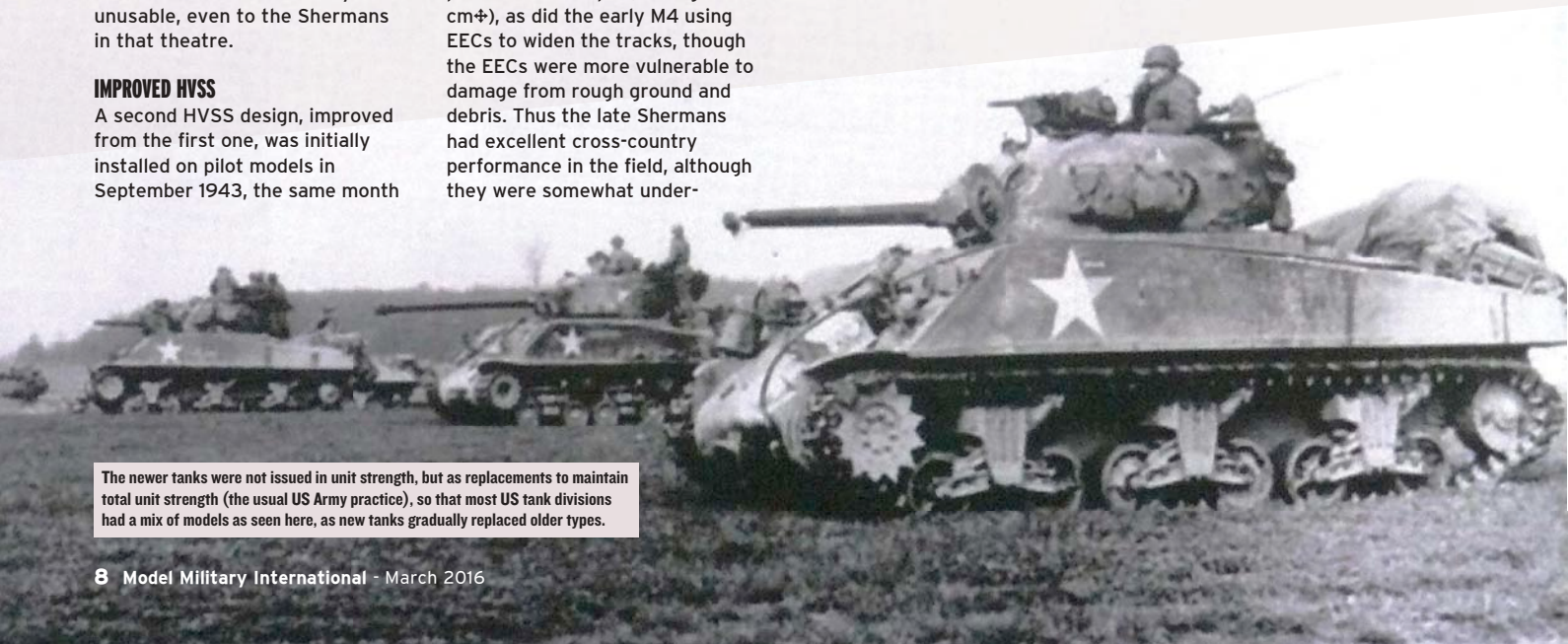
The real advantage of the M4A3E8 was in the new suspension and wider tracks, which reduced the ground pressure to 10.7 lbs/sq.in.(psi) (0.75kg/cm<sup>2</sup>), a great improvement over the 15.1 psi (1.06kg/cm<sup>2</sup>) of the M4 with the original narrow tracks. The German Panther had a ground pressure of 12.4 psi (0.87kg/cm<sup>2</sup>), as did the early M4 using EECs to widen the tracks, though the EECs were more vulnerable to damage from rough ground and debris. Thus the late Shermans had excellent cross-country performance in the field, although they were somewhat under-



This shot of a 4th Armoured Division M4A3E8 shows the T66 single-pin tracks well. Note the black-painted stars and the brackets on the mantlet for a canvas cover. The covers were not installed during WWII, but were found in the Korean conflict several years later.



This M4A3E8 of the 10th Armoured Division was photographed in Rosswalden, Germany, in 1945. Many crews used wooden boards or logs to hold extra stowage on the glacis. The standard placement of the .50 HMG on the turret was awkward for the crew to reach.



The newer tanks were not issued in unit strength, but as replacements to maintain total unit strength (the usual US Army practice), so that most US tank divisions had a mix of models as seen here, as new tanks gradually replaced older types.





Tanks of the 2nd Armoured Division, led by an M4A3E8, move through a German town in 1945. This tank has an unusual addition – a .30 LMG in front of the loader's oval hatch instead of the commander's cupola. Many Shermans were up-gunned by their crews.



Many Sherman crews added "soft armour" to their tanks in the form of sandbags and logs, and the extended mudguards provided shelves for stowing anything else the crew wanted to carry. This E8 is from 18th Tank Battalion, 8th AD, seen in Bocholtz, Holland in 1945.



14th Armoured Division was well-known for its extensive preparations for mounting sandbags as a protection from German Panzerfaust anti-tank grenades. As the sandbag installation covered the whole tank, the unit markings were painted on the gun barrel.



During the winter fighting in the Battle of the Bulge and afterward many tanks, like this M4A3E8 of 14th Armoured Division, were camouflaged in white paint. This tank had a broken scheme that revealed large patches of the original olive drab paint.



"BLOCK BUSTER 3rd" of 37th Tank battalion, 4th AD, showed instead a complete covering in white. Note the very rough look of the paint, indicating much of it was splattered onto the tank and swabbed on in a rather thick coat.



Crews tried many methods of improving the mediocre frontal armour protection of the Sherman. Here an M4A3E8 has had a thick layer of concrete added to the centre of the glacis, a practice done on many armoured vehicles on both sides.

powered compared to the Panther.

It should be noted that the E8 suspension was introduced during production and thus there were detail variations in the later Shermans. Early E8s had the M1A1 gun with no muzzle brake, and many retained the loader's gun-ring hatch. As production got

underway, the M1A2 gun with a muzzle brake and the oval loader's hatch became the standard. The wet stowage for the ammunition was a great success, reducing the number of tanks that caught fire after being hit from 50-60% for the dry stowage models to only 10-15% for the wet stowage

types. The improved combat safety resulted in only 3% of Sherman crewmen being killed in action by the end of the war. Locally, of course, some units, like 3rd Armoured Division, suffered heavier casualties, but overall US M4 crew losses were noticeably less than the other Allied nations

or especially the Germans.

In spite of this, the Battle of the Bulge showed that the M4 was becoming obsolescent, and the German guns of the Panthers and Tigers could penetrate the Sherman's armour easily. Losses of M4s in the Bulge were higher than anticipated and the increased ►





# Think Tank - M4A3 (76mm) HVSS



This side view of the same tank shows the thickness of the added concrete layer, which was somewhat effective against anti-tank rounds, though a solid hit usually broke up much of the concrete. This was a very carefully done job, about 6" (150mm) thick.



Gen. George Patton, commander of 3rd Army, disliked the practice of adding sandbags as ineffective and increasing maintenance requirements. 3rd Army then began a program of adding armour salvaged from knocked out US and German tanks. This is a 4th AD M4A3E8 with an early armour installation. This proved to be an effective modification.



This M4A3E8 also has been fitted with the up-armor package on the glacis plate, this time including a panel over the transmission cover. Later, some tanks had added armour plates on the hull sides, and still others to the turret.



An M4A3E8 of 6th Armoured Division, seen in Offenbach, a suburb of Frankfurt, Germany in March 1945, had a full glacis installation including the transmission cover plate. Depending on the thickness of the added plates, this modification was very effective.



This M4A3E8 of 11th Armoured Division, while not having the added armor of 3rd Army, shows a modification that was commonly done – the added .30 LMG for the commander, and more unusual, the placement of the .50 HMG in front of the loader for easier use.



In late March 1945, Gen. George Patton, commander of 3rd Army sent Task Force Baum behind German lines to free prisoners from a camp near Hammelburg, Germany. Most of the force was captured and all the vehicles were lost. Here infantry from 14th AD pass a TF Baum M4A3E8 knocked out during the raid.



This early M4A3E8 from 4th Armoured Division had the loader's gun-ring hatch, so its .50 HMG was flexible. In addition to the glacis up-armor installation, the commander had an added .30 LMG, welded to the gunner's sight cover. Note the extended barrel jacket for the air-cooled .50 Browning MG that replaced the coaxial .30 LMG in the mantlet.

◀ use of German infantry anti-tank weapons like the 88mm Panzerschreck bazooka and the even simpler and far more numerous Panzerfaust rocket-propelled anti-tank grenade was a serious threat to Allied armor.

## EXPEDIENT ARMOUR

Even before the Battle of the Bulge, crews and units began devising expedient armor. Some armored divisions, notably 14th AD, mounted frames for

sandbags on their tanks – 14th AD covered all of the hull and turret with extensive welded frames. Other divisions piled loose sandbags primarily on the glacis plate. Because of the soft ground widely encountered in the spring offensive, many Sherman units added logs to the sides of their tanks to use in un-ditching the vehicles when they bogged down.

Sandbags and logs provided little protection against German anti-tank weapons, and the 3rd

Army under Gen. George Patton forbade the use of sandbags as they overloaded the chassis and increased maintenance. Patton's units instead began a program of adding appliqué armor salvaged from knocked out US and German tanks. The layout evolved from just a glacis plate to full added armor sections on the glacis, over the transmission, and on the hull and turret sides, often mimicking the M4A3E2 "Jumbo" assault tank.

In addition to extra armor, US

crews in particular revamped the weapons on their vehicles, 4th AD being a leader in this process. The production configuration of the T23 turret with the oval loader's hatch placed the .50 Browning HMG on a pedestal mount behind the commander's cupola, where it could be used most effectively only by someone standing on the engine deck and thus exposed to fire. This was moved to the front area of the turret roof where it could be operated by the loader or





Civilians in Horazd'ovice, Czechoslovakia, welcome tanks of 4th Armoured Division in May 1945. This M4A3E8 was "Thunderbolt VII", the tank of Col. Creighton Abrams, commander of 4th AD. Note the added side armour on the hull and turret.



This M4A3E8 of 4th Armoured Division, also seen in Horazd'ovice, Czechoslovakia, carries all the late-war modifications - the full up-armor installation on hull and turret, coaxial .50 HMG, commander's added .30 LMG and the turret .50 HMG moved in front of the loader to allow it to be used from the loader's hatch.



14th Armoured Division retained its distinctive sandbag installations until the end of the war. This M4A3E8 carried the standard US European camouflage scheme of olive drab oversprayed with black bands, used since the Normandy landings in mid-1944



As mentioned, Gen. George Patton, 3rd Army commander, did not approve of sandbags on Sherman tanks as they strained the power train and increased maintenance. Normally assigned to 7th Army, 14th AD was for a short time assigned to Patton's 3rd Army, and Patton dressed down this 14th AD crew for its use of sandbags during that period.

the commander. In addition, many tanks had a .30 Browning LMG mounted in front of the cupola for the commander. These turret roof MGs were considered important weapons, allowing the commander to shoot at and mark targets immediately and to suppress enemy infantry. One additional upgrade was to replace the original coaxial .30 Browning LMG with a more powerful .50 weapon, using the lighter M2 aircraft air-cooled type. These could be identified by the extended barrel jacket protruding from the mantlet.

### INTO GERMANY

The big advantage the M4A3E8 had over earlier models was that it entered service when the US and Allied forces were on the offensive, pushing German forces back into Germany itself. By this time, US crews were far more experienced, and they had the advantages of sufficient supplies of fuel and ammunition plus air superiority to overwhelm the German defenders. Unit commanders like the legendary Creighton Abrams of 4th Armoured Division pushed the aggressive use of armor and combined forces, and by the close of the Battle of the Bulge in January 1945, the US armored division in the fields were more effective than their German opponents, who laboured under poor fighting conditions - lack of fuel, too many inexperienced replacements, the poor reliability of the Panther tank and lack of air cover.

In spite of early German successes in part of the Ardennes offensive, no German units reached their final objectives, and many retreated as infantry, having lost all their vehicles. From that point, the final drive into Germany would be a certainty, though the large number of anti-tank guns and infantry anti-tank weapons would make it costly. The number of German armored vehicles was whittled down until in April 1945, there were only 90 gun tanks and 400 other armored vehicles facing some 11,000 US Sherman tanks plus additional tank destroyers and Allied tanks.

### M4A3E8 SHERMAN VS. THE PANTHER - AN APPRECIATION

The combat record of the Sherman against its most common heavy foe is certainly mixed, and yet it was not as one-sided as the paper technical specifications might suggest. The old myth that it took five Shermans to destroy a Panther was a misreading of the fact that smallest tactical unit in an American armored division was a tank platoon of five tanks, and this is the force that would be sent out to investigate any reports of enemy tanks. The actual loss ratio of Shermans to Panthers in Europe was 2.2 Shermans lost per Panther lost. On average one crewman was lost when a Sherman was destroyed - as mentioned above, Sherman crew losses in the war amounted to 3% killed in action, and this includes crew killed outside the tank. Even in the earlier M4s, much more prone to burning, burns and other injuries were far lower than in many other Allied and German tanks. Both Pz.Kpfw. IVs and Panthers had serious problems with fires after being hit, as neither had wet stowage for their ammunition, and ►





# Think Tank - M4A3 (76mm) HVSS



Though the US Army was well-supplied with transport, it was common for infantry to hitch rides on tanks approaching the front lines. This E8 carried an impressive load of GIs into the smoking remains of a ruined German city in 1945.



An M4A3E8 of 6th Armoured Division supported these troops from the 44th Armoured Infantry Battalion in Oberdorla, Germany, April 1945. The infantry protected the tank from German anti-tank troops and the tank could neutralize enemy strong points.



Much of the fighting in the final months of the war was in cities and towns. Here, an M4A3E8 of 14th Armoured Division fired on enemy positions. The sandbags have been removed from this tank, which has the later T80 steel chevron tracks.



These are M4A3E8s of 25th tank battalion, 14th AD, entering Eichstaett, Bavaria, Germany in May 1945. The second E8 has the late-war T80 double-pin tracks later seen in Korea. They were more durable than the T66 single-pin design, which had more wear.

◀ their weaker side armour was vulnerable.

Yet on paper, and in testing during and after the war, the Panther was the best-performing and most effective tank of the war, faster on roads and cross-country, with better grade-climbing performance, a better ride due to the torsion bar suspension and a superb 75mm gun and excellent frontal armour that remained so to the end of the war. In excellent mechanical condition and operated by an experienced crew with a good driver, the Panther was easily the best and most effective heavy-medium tank of WWII. The chinks in the Panther's armour, and combat performance, didn't come from its design. They resulted from a parade of faulty decisions and the problems coming from the gradual destruction of Germany's industrial base and infrastructure.

The decision to build such a large and complex tank as the Panther over a smaller, simpler vehicle meant that far fewer tanks could be built for given resources. The added weight of the production Panthers severely overloaded the power train designed for a much lighter vehicle, in particular the transmission and final drive assemblies. The AK7-200 transmission had a serious design flaw resulting in the loss of third gear in many tanks because the synchromesh system failed. The clutches in the final drives had to be adjusted carefully to avoid overstressing either of them, and the tank required an excellent driver to handle the delicate drive system. A shortage of fuel led to decreased training for drivers, which then led to increased breakdowns and higher Panther losses.

There was also a darker side to the decline





6th Armoured Division captured the Luftwaffe Langensalza base, home to a unit of Ju-88G night fighters. This was a common scene as the last units of the Wehrmacht collapsed and surrendered to Allied troops. Note that some Ju-88s have had their propellers removed.



In the final weeks of the war, more Shermans had the sandbags and frames removed as German resistance decreased. Some units used the frames to hold stowed items. These tanks were being used for supporting fire – 90% of US tank ammunition used was HE.

in quality of German armaments as the war progressed – the strange and arrogant use of enemy prisoners of war (POWs), slave labour and concentration camp inmates to build many of Germany's weapons, from small arms to tanks and many of the components that went into them. The use of forced labour, much of it hostile to German interests, resulted in many acts of sabotage, such as improper tightening of fuel and oil lines, tools and scrap welded inside transmissions to strain the gears, and other acts that reduced the effectiveness of a number of German weapons.

In contrast, the M4A3E8 Shermans were built in large plants safe from enemy air attack, by workers who were for the US war effort, and acts of sabotage were rare. The US Army went to the automobile industry to build large numbers of standardized M4 tanks, allowing the US to supply not only its own troops but those of the Allies as well. The US Army Ground Forces (AGF) under Lt. Gen. Lesley

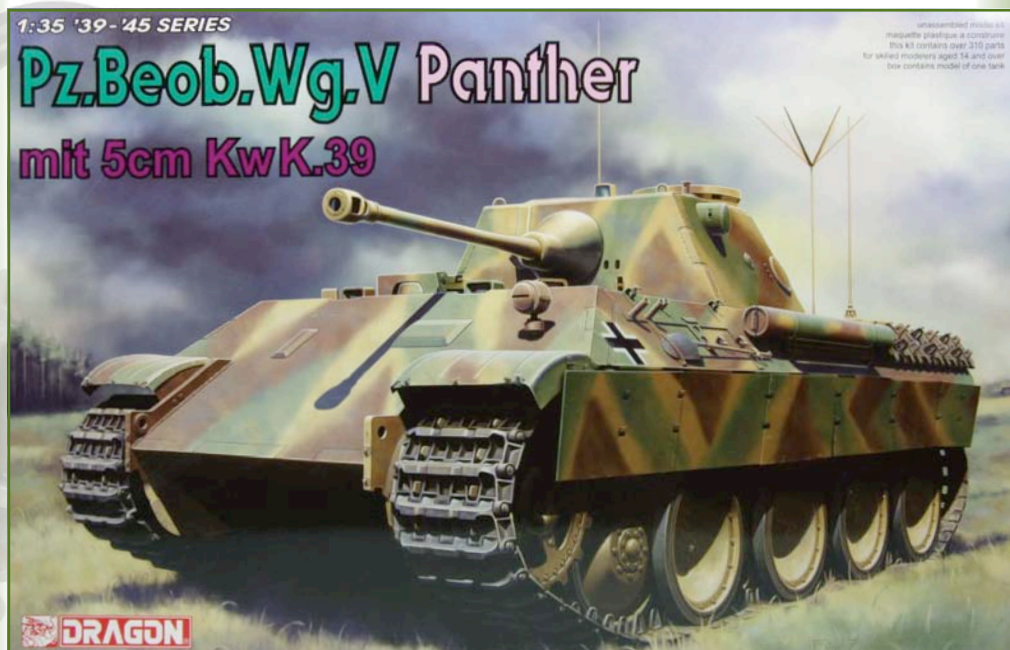
McNair had insisted on weapons that met a battle need and were battle-worthy. The Army's major planning mistake was in considering the Panther as another German corps-level limited-use tank like the Tiger, not likely to be encountered in large numbers. By the time they realised this was not true, planning for production had already been done, and timely responses to the Panther threat would have to wait. It was left to Allied Sherman tank crews to pay the price.

But in the end, AGF's insistence on reliable, mobile, adequate tanks was proven correct. The M4 Shermans were the most reliable medium tanks of the war, and that, coupled with the use of combined land and air power and superior logistical support of the field units, defeated German technical sophistication. Built for support in the offense, the M4A3E8 was the right tank at the right time to help bring an end to the Western European campaign against Hitler's Germany. ■



In this iconic view of the end of the war in Europe, an M4A3E8 of 15th Tank Battalion, 6th AD, speeds down a German Autobahn past thousands of German POWs headed into captivity, most of them grateful to be alive at the end of the deadliest war in history.





# OBSERVATION PANTHER

Dragon's latest variation on the Panther theme is an unusual variant of the Beobachtungs observation vehicle. Andy King takes a look.

**P**resented as an alleged 'Beobachtungs' or observation vehicle, this particular release by Dragon features a Panther 'A/D' chassis and a turret fitted with a 5cm KwK.39 gun for it's main armament. I say allegedly because although there was an artillery observation Panther fitted with a dummy wooden gun I cannot find any reference to one with a 5cm gun so I can only surmise that this is a 'paper panzer' although I'm happy to be proved wrong by the readers of MMI.

Anyway, the kit is basically Dragons' Panther 'A/D' and included in the box are around 300 parts moulded in grey styrene, two strips of thin white vacuum-formed styrene for the side skirts, a tiny decal sheet with just three German crosses, DS Vinyl tracks and...ummm... not much else really. No etch, no metal barrel, no clear styrene periscopes and a mish-mash of parts from different kits, most of which are marked as not-for-use as they're only applicable to the proper gun tank.

Fortunately the base Panther is a good one and considering the age of the moulds there is very little in the way of flash apart from the 'star' antenna, which will be fun to clean up without breaking.

I think the only new parts are for the turret front, cupola and other bits on sprue 'F' and speaking of the cupola it is basically in two halves with no mention of the hatches (part J18 but marked as not for use) plus there is no way of putting a figure in it unless you carve out a hole in the cupola and separate the hatch into two halves.

The tracks as stated are one-piece DS vinyl and love them or hate them (I fall into the latter category) it looks like we're stuck with them as Dragon don't seem to be listening to the suggestion of putting individual track links back in as well as the vinyl things so that everybody is happy. The quality in my sample kit is once again poor as due to the packaging some of the guide horns have been flattened plus on one track length there looks to be

a scar from the moulding process.

On a serious note I've read reports about DS Vinyl tracks becoming brittle and leaking some sort of fluid so be warned. Painting-wise, there are just two options for an overall dark yellow Panther or one with a three-tone camouflage scheme, both from unidentified units 1943. The only problem with that is Beobachtungs Panthers (the real ones) were not built until 1944/45, oops!

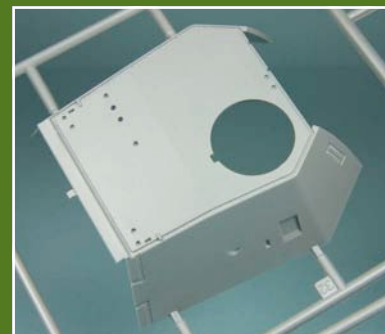
The main saving grace is that there are enough bits in the box to make a proper Panther A. With the omissions of etch and other stuff mentioned above I assume that cost cutting is the order of the day as once upon a time Dragon kits were packed with extra goodies.

Also Dragon really need to rethink the packaging of the tracks as I've lost count how many kits I've received with flattened guide horns. ■

Thanks to The Hobby Company Limited for the review sample [www.hobbyco.net](http://www.hobbyco.net)



Panther A upper hull. This will be suitable for a standard Panther A too.



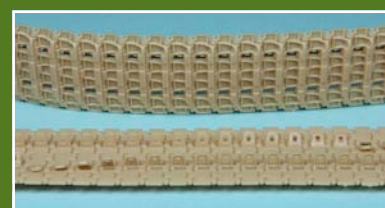
Standard Panther A turret is included too.



Rear turret plate.



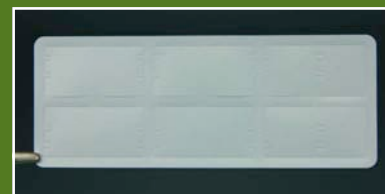
Detail of the kit is very good.



Sadly, the DS tracks have been damaged due to poor packaging again.



Another view of the track damage.



Die-cut side skirts.



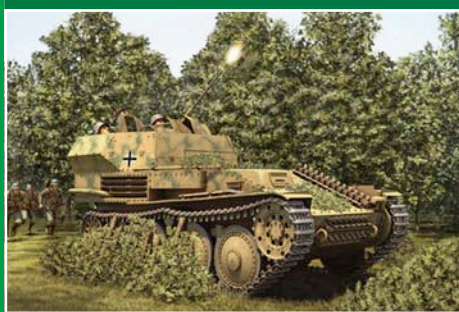
The kit's decal sheet.



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# EXPEDIENT EIC

## PART ONE - CONSTRUCTION AND CONVERSION



The Editor adds appliqué armour to Tamiya's brand new 1:35 scale M4A3E8 "Easy Eight" Sherman.





# EIGHT

The M4A3 was the first Sherman variant to feature HVSS (Horizontal Volute Spring Suspension) as factory fitted equipment. HVSS suspension was equipped with wider tracks to distribute weight more evenly. These wider tracks allowed more armour to be fitted and offered a more comfortable ride for the crew, but also required narrow track guards to be fitted to the sides of the hull.

With its experimental E8 designation, the smooth ride of the HVSS led to the nickname Easy Eight for this Sherman variant. The M4A3E8 first entered service in Northern Europe during December 1944, and the variant continued on the front lines post-war, including service in Korea.

Tamiya has expanded its WWII Allied catalogue with a new 1:35 scale M4A3E8 Easy Eight Sherman. This kit has nothing at all in common with the Tamiya Easy Eight released around 1970.

Tamiya's brand new 1:35 scale M4A3E8 Easy Eight Sherman comprises 278 parts in olive coloured plastic, ten parts in clear and two black full-length flexible tracks.

The kit is almost all new. The running gear sprues are taken from Tamiya's 2011 Israeli M51 release. I built this kit at the time and found the HVSS to be well detailed but delightfully simple to assemble, with only seven parts per unit

including the wheels.

The only other recycled sprue is the .50 cal machine gun, which dates from 1998.

The kit features the T23 turret with the late-style oval loader's hatch and subtle cast texture wherever appropriate. The running gear includes the later Horizontal Volute Spring Suspension (HVSS) suspension units, and full-length flexible T66 tracks.

All of the other key features of the M4A3E8 are depicted too, including the 47° glacis hull with the enlarged hatches, the correct rear deck configuration and 76mm gun barrel with muzzle brake. Appliqué armour is not provided.

The lower hull is made up from a "flat pack" arrangement of separate floor, sides and engine firewall. The track guards and sponsons are cleverly moulded as one piece per side. The diagonal supports are supplied as separate parts.

Detail on the tracks is very good. They look thin, but comparison with reference photos suggests that Tamiya has got this right. The guide horns are moulded onto the tracks with an indentation front and rear to suggest the hollow nature of the real thing. There is one raised pip on the inside of every 16th link, but these will hardly be visible once the tracks are fitted. The tracks may be fixed with regular plastic glue. Note that the idler wheel mounts are also ▶



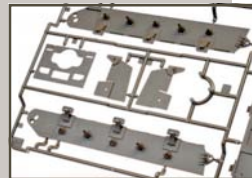
The model features convincing cast texture in appropriate areas.



The upper turret shell.



The lower hull is supplied as separate panels, including the engine compartment firewall.



The hull floor features escape hatch and panel detail.



The sponsons are moulded with the narrow track guards – a clever touch.



Fine detail on the tools and fittings.



The suspension units are broken down simply but are quite well detailed.



The .50 cal machine gun dates from 1998.



Tamiya's full-length flexible tracks may be fixed with regular plastic cement.



The vision blocks, headlight lenses and the Commander's goggles are all supplied as clear parts.



Simple national markings are offered for two options.





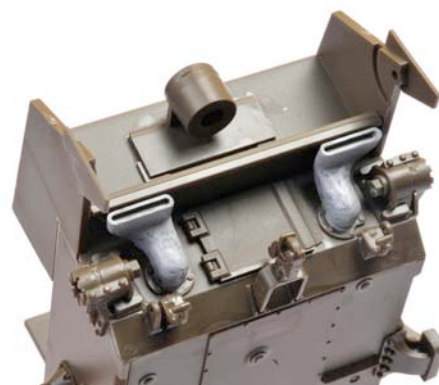
Cast texture was added to the transmission cover with Mr Surfacers 500. Tamiya Extra Thin Liquid Cement was used to stipple and randomise the effect.



The multi-part lower hull vent will swing between raised and lowered positions when fitted.



The final effect. Sadly, all of this was hidden by the appliqué armour added later.



The exhausts were also treated to a rough cast finish.

workable track tensioners. Do not glue these parts in place initially, as you may want to swing the arms to tighten the vinyl track when it is installed.

The Commander's cupola features separate clear vision blocks fitted from the inside. All hull and turret crew hatches may be posed either open or closed. A pillar-mounted .50 cal machine gun is also supplied. Although the instructions show it fitted to the pillar, the machine gun may also be stowed at the rear of the turret.

Two Jerry cans plus six spare individual track links with separate hollow guide horns are

offered as stowage.

The package is rounded out with is a nicely moulded and animated Commander figure.

Tasca has set the standard for Sherman kits for nearly ten years, so comparisons between Tasca's 2010-release 1:35 scale Easy Eight and Tamiya's new kit will be inevitable. Both look great when complete, but the approach of the two kits is markedly different. Whereas Tasca's kit comprises more than 800 parts, Tamiya's is less than 300.

A good example of the different design philosophies is the running gear. Tasca's suspension units are

made up from 17 pieces, and will be articulated when assembled. Tamiya's are made up from seven pieces, including the road wheels. The only compromise is lack of articulation - the running gear can be posed any way you want as long as it is flat on the ground. For most modellers, this will not be an issue.

#### EASIEST EIGHT

Tamiya's new Easy Eight is a pleasure to build. It's fast too.

The experience was reminiscent of building Tamiya's Israeli M51 back in 2011. The lower hull is made up of flat pack panels that fit perfectly, and the running gear

goes together very quickly.

I liked the cast texture on the model but decided to enhance the effect on the transmission cover. I slathered the plastic part with Mr Surfacers 500. I applied the gooey mix unevenly using an old brush, dragging it around as it dried to create an almost layered effect. When the liquid had partially set, I also stippled the surface with the end of a stiff square-ended brush. The same treatment was applied to the exhausts.

As it turns out, this extra work was almost entirely pointless as the transmission cover was mostly hidden by the appliqué armour.



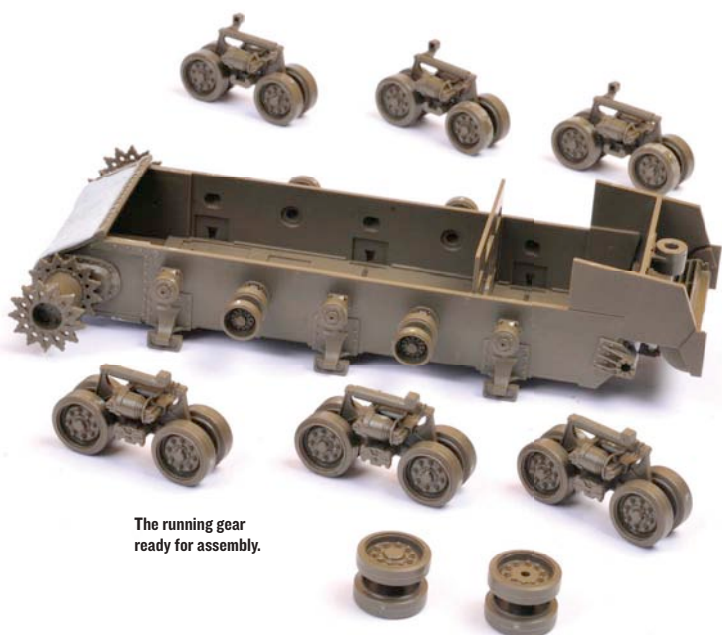
Wheels and sprockets assembled.

Seven easy pieces - this is all that is required for each suspension unit.

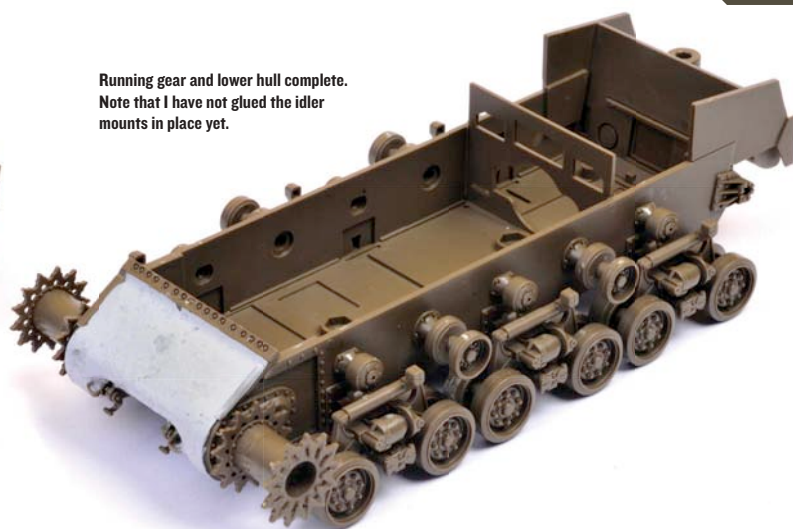
Close-up view of one of the assembled HVSS suspension units.



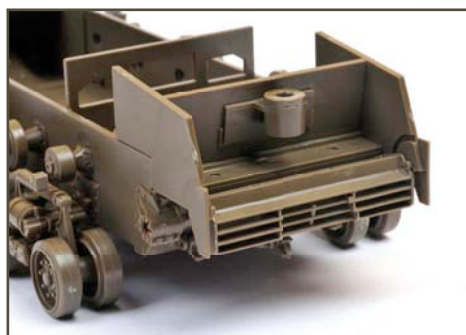




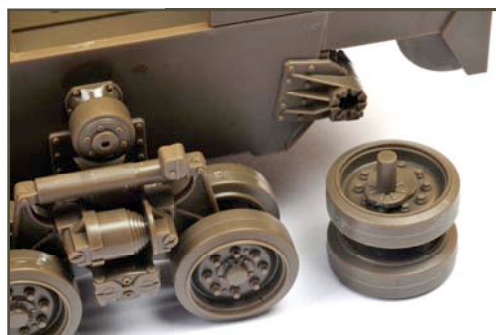
The running gear ready for assembly.



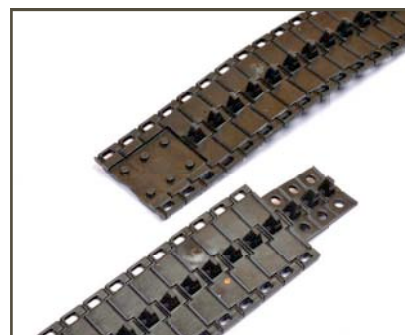
Running gear and lower hull complete. Note that I have not glued the idler mounts in place yet.



The rear of the hull with the vent unit swung down into the lowered position.



The idler wheel may be set in different positions thanks to the star-shaped track tensioner system at the base of the idler mount.



After some deliberation I decided to use the kit's full-length vinyl tracks.

From this point on, basic construction followed the sequence of Tamiya's instructions. The ejector pin marks on the inside of the loader's turret hatch were scraped off with my Mission Models Micro Chisel, and the slightly scored plastic was repaired with Tamiya's Liquid Surface Primer.

After some deliberation I decided to use the kit's full-length flexible tracks. These were looped and

glued using Revell Contacta cement, then clamped and left to set.

Once basic construction was complete there were no gaps visible.

The only areas requiring any attention was the join between the upper and lower turret halves. Although there was a join line here on the real vehicle, I thought it looked a bit too pronounced so I reduced its prominence with a

smear of Milliput.

In common with many Tamiya kits, the upper and lower hulls of this Easy Eight are designed to be joined without glue using a stout tab at the front and a polythene cap at the back. I usually glue the hull anyway, but the fit was so good on this model that I left it as designed. It was actually quite handy

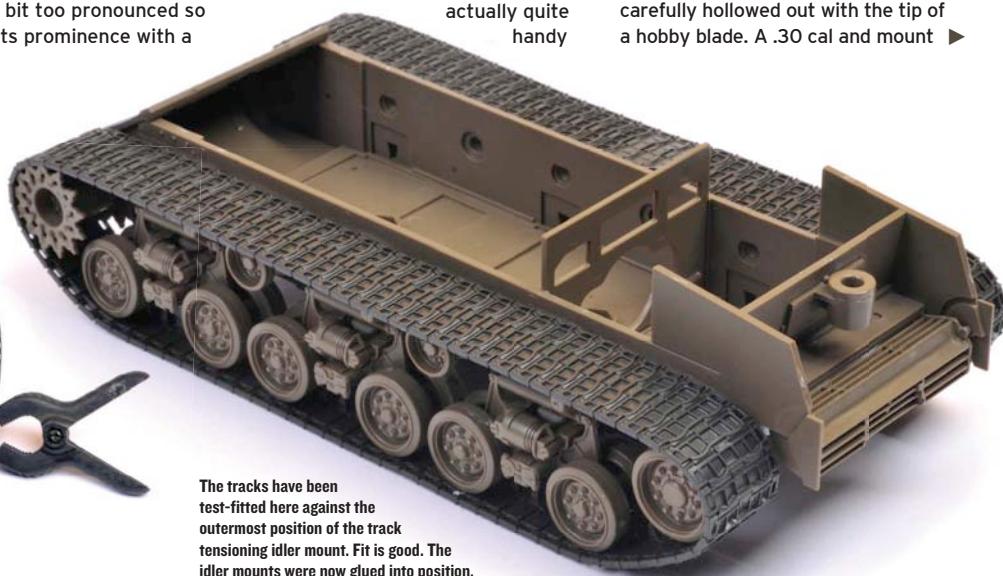
to be able to remove the upper hull when fitting the tracks and the driver figure.

#### REPURPOSED ARMOUR

With basic construction complete, it was time to add the appliqué armour and other modifications.

First, the end the turret .50 cal machine gun barrels were very carefully hollowed out with the tip of a hobby blade. A .30 cal and mount ▶

The tracks were glued with Revell Contacta cement then clamped overnight on either side of the guide teeth.



The tracks have been test-fitted here against the outermost position of the track tensioning idler mount. Fit is good. The idler mounts were now glued into position.



◀ were then borrowed from spare parts of a Dragon Sherman kit.

Tank Workshop offers a resin appliqué armour section for the glacis plate. I bought this as a start. I would need to make the other armour sections myself.

Based on reference photos and Tank Workshop's glacis resin part, it seems that the appliqué armour was very thick. I dug into my materials drawer and found an old thick piece of plastic that I had used to paint sample camouflage finishes for a book many years ago. This looked about the right thickness, and it seemed appropriate that this plastic was being re-purposed, as the armour on the real tank was cut from old disabled tanks.

I cut the panels using reference photos and the appliqué armour pieces in Dragon's M4A3E8 "Thunderbolt VII" kit as a guide. The outlines were drawn onto the plastic in pencil, then the thick plastic was scored repeatedly and finally snapped. Each of the side turret and hull armour sections comprised three parts. The edges were sanded so that they would fit at the correct angle and without gaps.

The parts were glued together and, once set, the edges were bumped gently with the cutting disk fitted to my Dremel motor tool to suggest rough torch cuts. A dental burr was fitted to the Dremel next to add some pitting to the otherwise featureless surfaces.

Model Kasten bolt heads were glued to the lower front hull armour piece.

Finally, the completed armour pieces were glued to the model. ▶

The sponson/track guard parts are reinforced with plastic tube that attaches between the top of the sponsons and the inner ceiling of the upper hull.

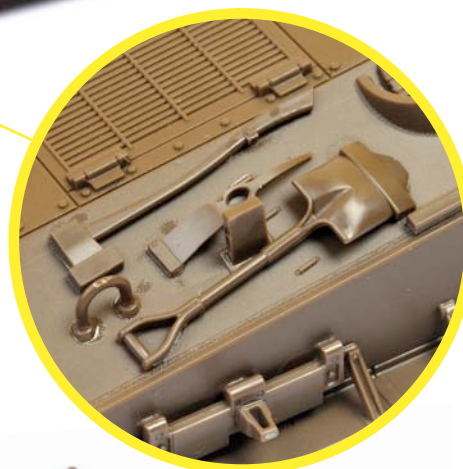


Fittings have been attached to the upper hull.



The spare track links are supplied with separate hollow guide horns. The prominent ejector pin circles won't be seen as they are facing the hull side.

Some of the tool mounts are lacking. I'll do something about that next time!



The fittings on the glacis were not added yet. Note the large tongue that holds the upper hull in place.

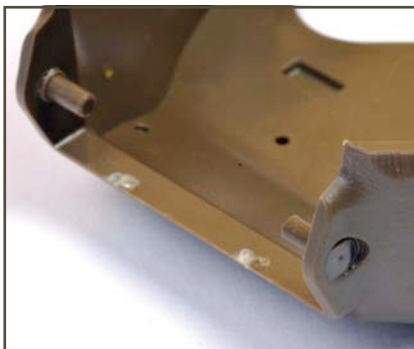


The upper hull is fitted via a stout tab at the front and a polythene cap at the back. This is very effective. Truly no glue is required.





Check out the perfect fit between the transmission cover and the upper hull with no glue.



Two plastic pins in place before the gun is mounted in the turret.

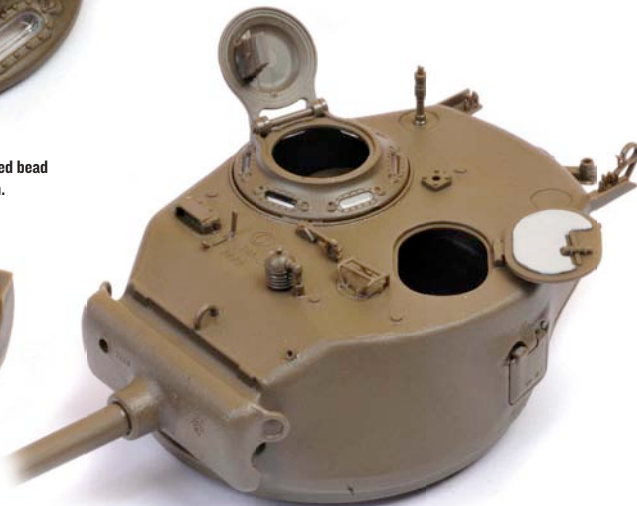
Tamiya supplies a mount for the kit's Commander figure. This was also fitted before the cupola was glued in place. In the end though, I relocated this when I used the after-market Tamiya U.S. tank crew figures.



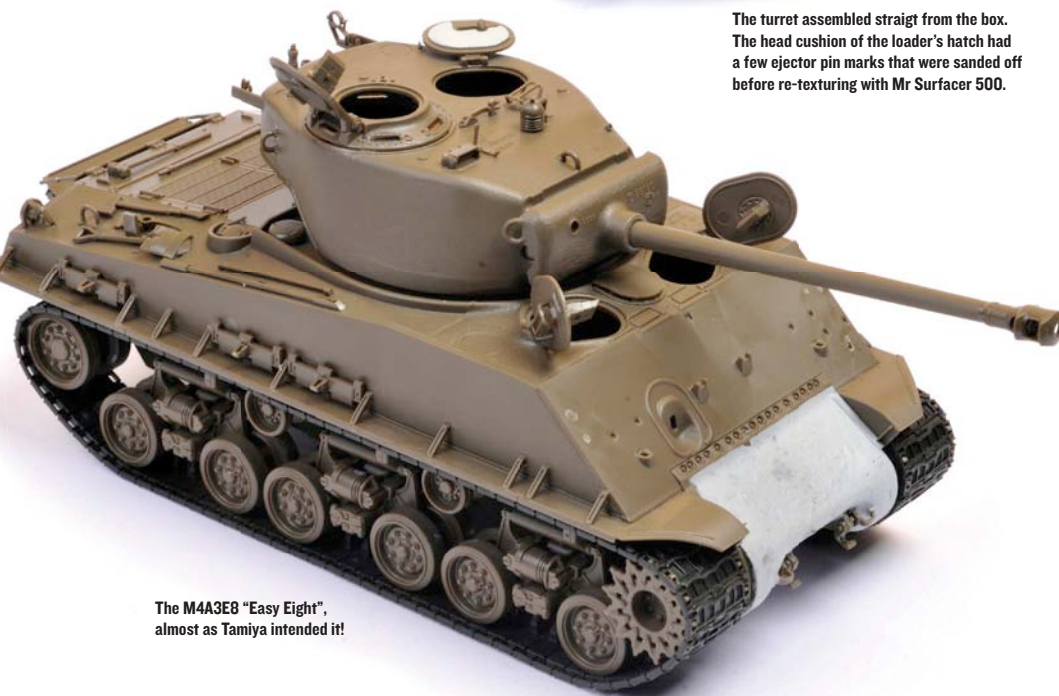
The clear vision blocks were glued into the Commander's cupola using a precisely applied bead of Tamiya Extra Thin Liquid Cement for each.



Nice muzzle break detail including a separate round bushing.



The turret assembled straight from the box. The head cushion of the loader's hatch had a few ejector pin marks that were sanded off before re-texturing with Mr Surfacer 500.



The M4A3E8 "Easy Eight", almost as Tamiya intended it!

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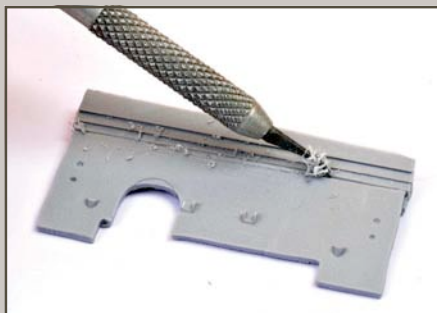
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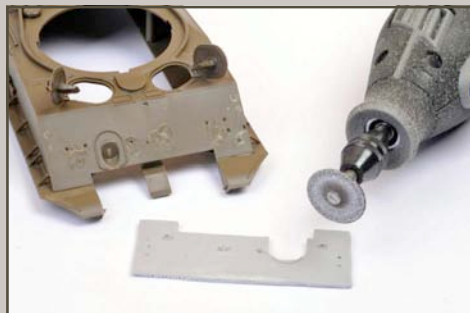
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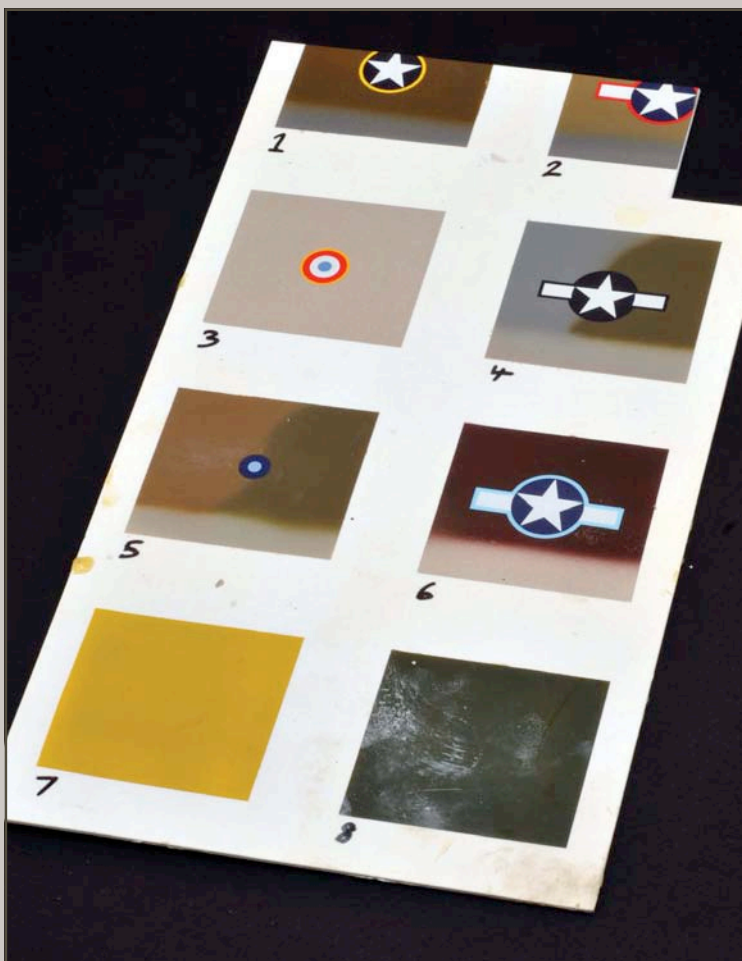
Tank Workshop offers a resin glacis armour section. This was removed from its casting strip with a scribe and a sharp hobby knife.



Raised detail on the kit's glacis plate and the remnants of the casting strip on the back of the resin appliqué armour were removed with the cutting disk on my Dremel motor tool.



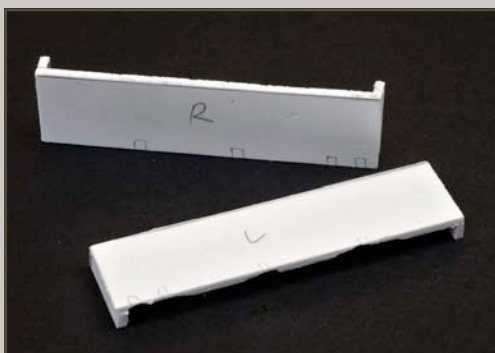
The glacis was sanded with a coarse sanding stick to make sure there were no unwanted protrusions.



This thick piece of plastic had been used to paint some sample camouflage schemes for an old book of mine, and had sat in the drawer for more than ten years. It was about to be repurposed as appliqué armour!



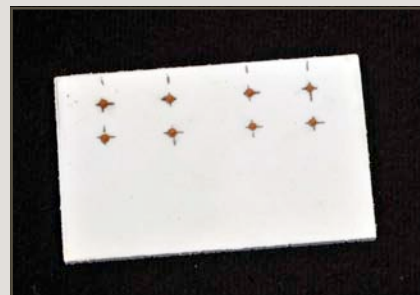
Sections were measured and cut for the upper hull sides.



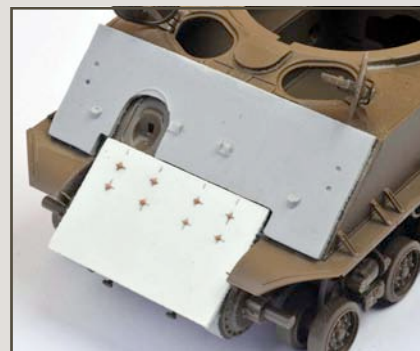
The hull armour has been glued together in this photo. Note the rough rectangles drawn onto the bottom of the armour. This indicates the position of the diagonal track guard braces. The plastic has been thinned on the inside to accommodate these.



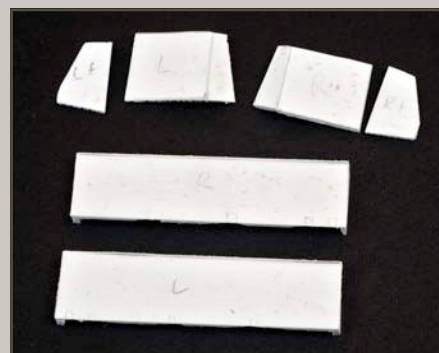
Modelkasten rivet heads were sliced from their sprue directly onto Tamiya tape to ensure they did not fly off onto the carpet.



The transmission cover armour cut to size, marked up and fitted with the rivets.



The transmission cover armour was glued to the model.



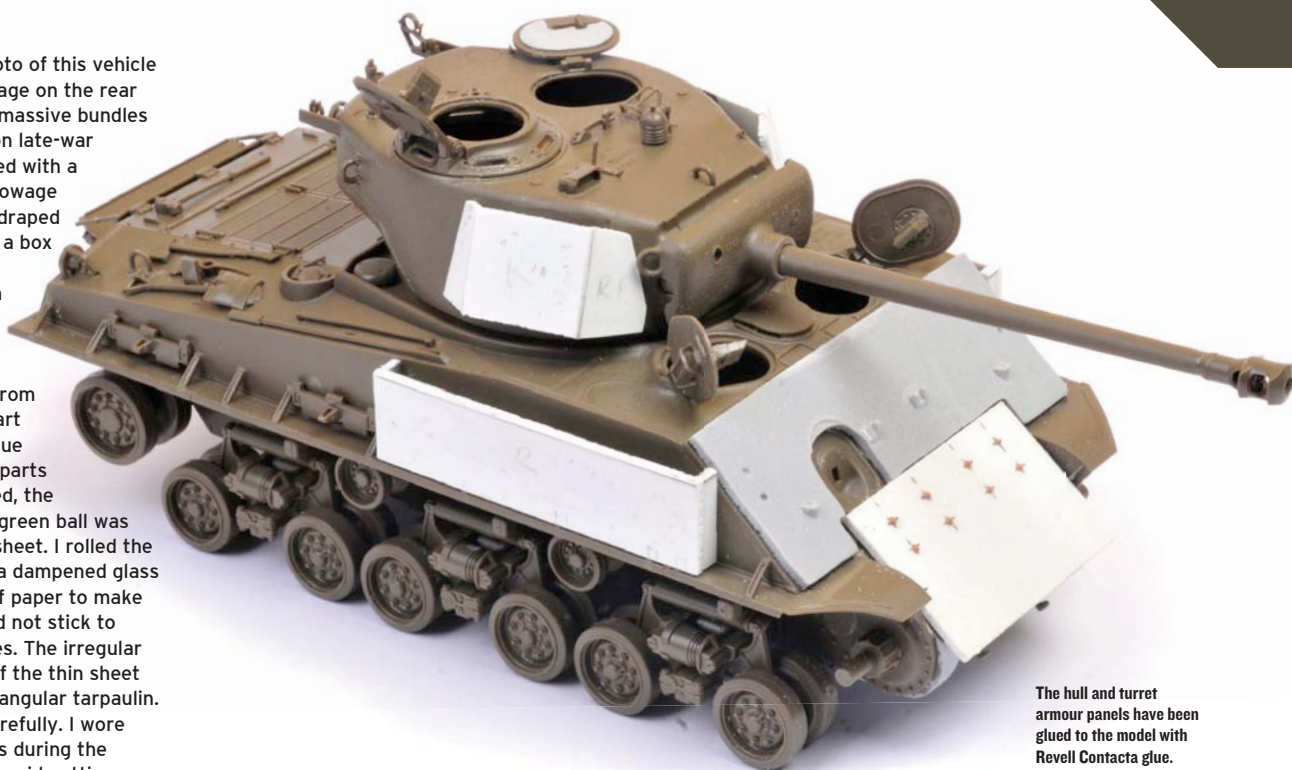
The completed appliqué armour sections for the hull and the turret. The edges have been roughed up with the cutting wheel of a Dremel motor tool to suggest coarse torch cuts. The surface has also been randomly pitted with a dental burr.



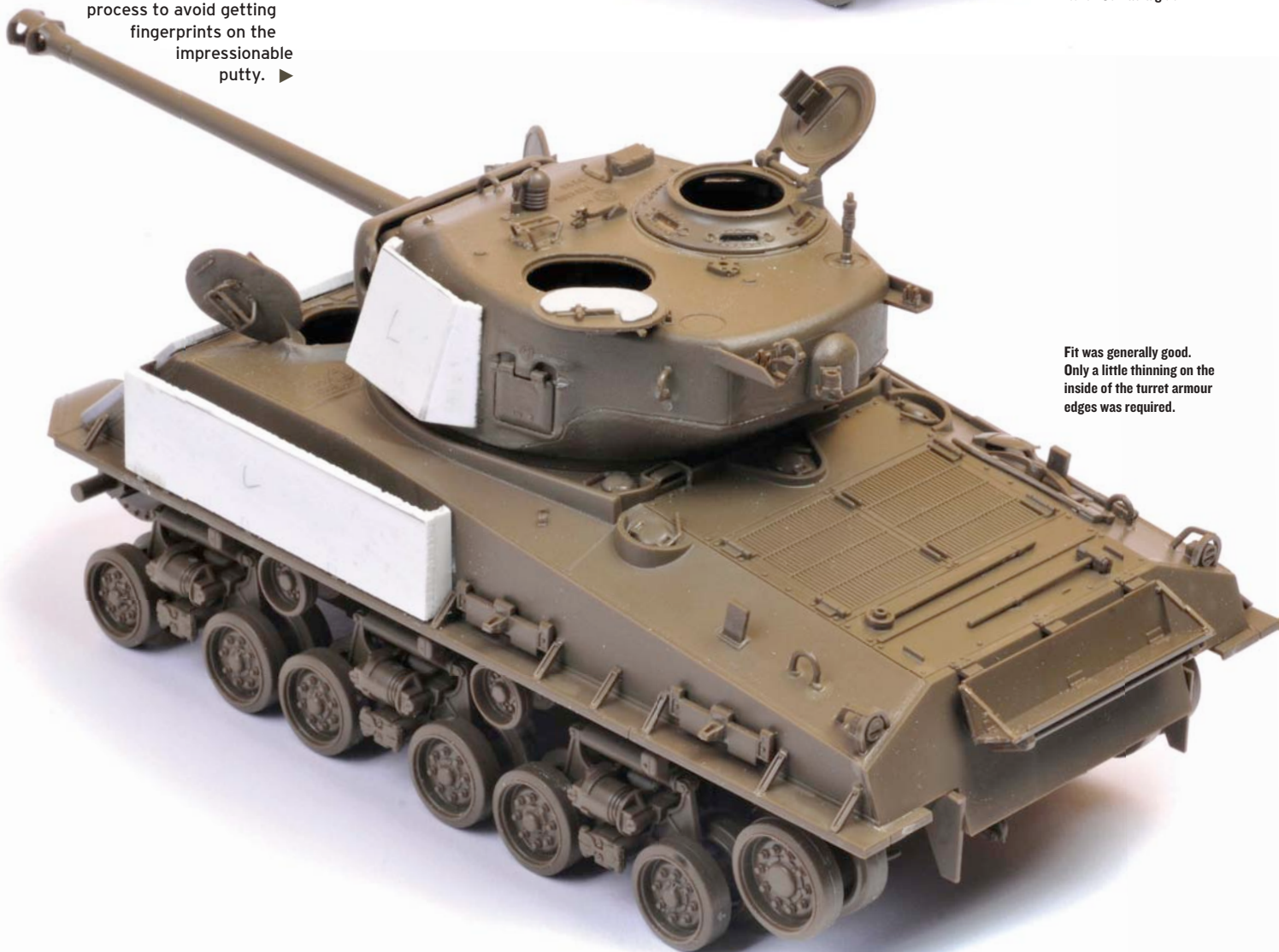
#### ◀ STOWAGE

The reference photo of this vehicle shows some stowage on the rear deck, but not the massive bundles sometimes seen on late-war Shermans. I started with a few stock resin stowage items including a draped uniform tunic and a box of fruit purchased online, and a resin box and packs from Value Gear.

I then formed a large tarpaulin from Kneadatite two-part epoxy. With the blue and yellow epoxy parts thoroughly blended, the resulting squishy green ball was rolled into a thin sheet. I rolled the Kneadatite using a dampened glass jar on greaseproof paper to make sure the epoxy did not stick to any of the surfaces. The irregular edges were cut off the thin sheet resulting in a rectangular tarpaulin. This was rolled carefully. I wore thin plastic gloves during the process to avoid getting fingerprints on the impressionable putty. ▶



The hull and turret armour panels have been glued to the model with Revell Contacta glue.



Fit was generally good. Only a little thinning on the inside of the turret armour edges was required.





Rear deck stowage was based around some stock resin items from Value Gear and elsewhere.



The tarpaulins and packs were rolled from Kneadatite two-part epoxy putty.



The resin uniform tunic and the box of apples were purchased via EBay. The sleeve of the tunic was heated and bent to conform to the edge of the hull.



An Air Identification Panel was made from Kneadatite two-part epoxy putty. It was allowed to settle over the stowage and then carefully removed when it had set.

◀ Straps were sliced from the leftover sections and wrapped around the rolled tarp. Holes were added using a pointy scribe.

While the putty was still flexible, I gently pressed the tarp into the space between the resin stowage and the jerry cans

A couple of small blankets / packs were made using the same method. I added striped lines to the rolled blanket using the tip of a toothpick.

A U.S. helmet was also glued onto the rear deck near the stowage.

#### AIR IDENTIFICATION

I decided to add an Air Identification panel to lend some bright contrast to the otherwise drab finish.

Air Identification Panels were used in the European Theatre from D-Day until the end of the war as a way for Allied aircrews to distinguish German from US and British vehicles on the ground.

The US Army Panel Set comprised a fluorescent pink/red panel and a fluorescent yellow

panel. A blue panel was available too, but this was only used by vehicles behind the front lines. Each of the panels was backed with white, and this could be used in combination with the other colours. Two versions were available - either 12 feet long and 28 inches wide; or a shorter 6 foot long pennant.

After the Germans became aware of the use of the panels, they were rotated in combinations of red, yellow and white according to a schedule that changed on a weekly basis.

The panel was made from Kneadatite using the same techniques described above. The rectangle was placed gently over the stowage and allowed to sag naturally. Once the panel had set overnight, it could be simply lifted off the rear stowage and painted separately.

I chose yellow for this model's panel. As yellow can be a notoriously tricky to paint, I started with a base coat of Tamiya White Primer from the spray can, followed by Vallejo yellow brush

painted in several coats.

The borders of the panels were carefully brush painted Vallejo Khaki to complete the paint job.

#### INTERMISSION

Tamiya has certainly snatched the crown of "Easiest Easy Eight in 1:35 scale", with excellent detail and a very buildable parts breakdown.

Detail aficionados may want to

replace the plastic brush guards, and perhaps the .50 cal machine gun, but even without these enhancements Tamiya's new 1:35 scale M4A3E8 will look great straight from the box.

Next time, I will describe the painting and weathering of the model, and adding Tamiya's new 1:35 scale U.S. European Theatre tank crew figures.

Highly Recommended! ■



The Air Identification Panel in place on the stowage.





Detail parts have been added to the glacis armour. The .50 cal machine gun has been relocated in front of the loader's hatch, and a new .30 cal machine gun fitted in front of the Commander.



Milliput was used to reduce the prominence of the weld line between the upper and lower turret halves.



A sneak peek at the finished model with crew. We'll have details of painting, weathering and the figures in the next instalment

## Modelspec

Tamiya 1:35 U.S. Medium Tank M4A3E8 Sherman  
"Easy Eight" European Theatre Kit No. 35346

### Accessories and Decals Used:

Tank Workshop Item No. TWS 350022  
.30 cal Machine Gun and Mount from Dragon Kit No. 6183 - M4A3E8 Thunderbolt VII  
Parts from Value Gear Stowage Sets  
Dio Dump Item No. DD006 - Chicken Wire

### Tools and Materials Used:

Tamiya Extra Thin Liquid Cement  
Revell Contacta Professional Cement  
Selley's Supa Glue  
Kneadatite Blue-Yellow Epoxy Tape  
Milliput White Two-Part Epoxy Putty  
Tamiya 10mm Masking Tape  
Tamiya Liquid Surface Primer  
Gunze Mr Surfacers 500  
Microscale Industries Kristal Klear  
Iwata HP-CH Airbrush  
Evergreen plastic sheet

### Paints & Finishing Products:

Vehicle:  
Tamiya Spray Grey Primer  
Tamiya Spray Fine White Grey Primer  
Tamiya Spray Can: TS-28 Olive Drab; AS-15 USAF Tan  
Tamiya Acrylics: XF-1 Flat Black; XF-2 Flat White;  
XF-49 Khaki; XF-57 Buff; XF-59 Desert Yellow; XF-60  
Dark Yellow; XF-64 Red Brown.  
Vallejo Panzer Aces Acrylics - 310 Old Wood; 311 New  
Wood; 337 Highlight Ger. (Black)  
Vallejo Model Color - 919 Foundation White; 925 Blue;  
942 Light Green.  
Alclad II Flat Clear Lacquer  
Sin Industries Filter - P402 Brown for Desert Yellow  
MIG Productions Earth Wash  
AK Interactive Enamel Wash - AK 045 Dark Brown  
2B Pencil  
Crew Figures:  
Flesh -  
Base Coat: Tamiya White Primer followed by mix of  
Panzer Aces 341 Flesh Base and 342 Flesh Highlights.  
Wash: Rowney Georgian Oil Paint 221 Burnt Sienna.  
Variations and Highlights: Vallejo Panzer Aces  
acrylics 341 Flesh Base; Vallejo Model Colour 919  
Foundation White (various mixes)  
Uniforms -  
Base Coats: Pale Uniform Colour - Vallejo Panzer  
Aces acrylic 318 US Army Tankcrew mixed with  
a small amount of 322 Highlight US Tkcr.; Green  
Uniform Colour - Vallejo Model Colour 70893 US  
Dark Green.  
Helmets: Vallejo Panzer Aces 318 US Dark Green US  
Army Tankcrew  
Straps: Vallejo Panzer Aces acrylic 312 Leather Belt  
Wash: Tamiya XF-1 Flat Black and XF-64 Red Brown  
mixed with water and Future floor polish.  
Variations and Highlights: Base coats mixed together  
and with Vallejo Panzer Aces 321 Highlights British  
Tkcr., 322 Highlight US Tkcr. and Vallejo Model  
Colour 847 Dark Sand and 919 Foundation White.  
Borders and Additional Shading: Vallejo Panzer Aces  
337 Highlight Ger. (Black).

✓ Superb fit; straightforward build; high level of detail.

✗ A few chunky details (e.g. plastic brush guards).

### Available from

Thanks to Tamiya for the sample [www.tamiya.com](http://www.tamiya.com)  
Tamiya kits are distributed in the UK by The Hobby  
Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Rating ●●●●●●●●○





Graham Tetley takes a walk down 1980s memory lane with Tamiya's re-issued 1:35 scale Sgt York Air Defense Gun System.

# 1980S GOLD

**T**he M247 Sergeant York DIVAD (Division Air Defense) was a self-propelled anti-aircraft gun that was based on the M48 Patton. It was intended to fight alongside the M1 Abrams and M2 Bradley and offer protection from low flying aircraft & helicopters in a role similar to the Soviet ZSU-23-4 and German Gepard. A series of technical problems and cost overruns resulted in the cancellation of the project in 1985. A few survive in museums and as gate guards to this day.

## HAPPY MEMORIES (AND WHAT'S IN THE BOX)

August 1983 was a memorable month. 'Give It Up' from KC and the Sunshine Band kept Spandau Ballet's 'Gold' from the Number One spot and we finished the month with UB40's 'Red Red Wine' storming the Charts. Also, this kit was first released in this month and I remember building it not long after, still scarred by 'Gold' not getting to Number One.

You will be pleased to know that the model has aged better than I have and it is totally unchanged. More importantly, Spandau Ballet has recently re-formed - yeah!

Once you stop looking at the

superb box artwork we have four sprues moulded in tan coloured plastic plus a lower hull tub and two lengths of vinyl tracks. The kit is quite basic by today's standards comprising of only 268 parts and no etch. Eduard did do a set (35757) but it is currently unavailable. All sprues are individually bagged and crisply moulded with no flash or imperfections at all. True to form, the instructions are typical Tamiya, being clearly drawn & flawless and construction will not leave you highly strung. A small decal sheet gives two marking options and we have three paint schemes to choose from - the lovely sand/tan/brown as shown on the box top, a multi-green temperate option or, if you prefer bland, overall olive drab. Paints recommended are naturally from the Tamiya range.

So, criticisms first. Looking at the parts, some do show their age as the detail is quite clunky. A good case in point is that virtually all of the grab handles and lifting rings are moulded solid. This is especially apparent on the side stowage boxes and air cleaners. The driver's periscope hatch is also moulded closed and the periscopes on the turret are just simple blobs.

The lower hull dates from a time when Tamiya motorised everything, though strangely not the M48 on which this kit is based. This results in the lower hull having lots of holes that you need to fill as they are very visible on the finished model. Turning to the tracks, these have not been moulded in Tamiya's newer, more flexible plastic but the harder stuff. We join them by melting four

plastic pins, which in this day and age holding a screwdriver over a lighted candle would have the Health & Safety zealots going round and round in fits! They are little too rigid for my taste and, unfortunately, there is a lot of flash on them so I will be replacing mine with Bronco individual links.

There are however many good points to this model. To cut a long story short, from what I remember, fit of the upper & lower hull needs a bit of filler at the front but is actually quite good. Tamiya's parts breakdown makes construction quick and easy, especially so where the suspension is concerned. The M48 model has the suspension a little too high - legend has it that this was due to Tamiya measuring an empty vehicle. It would be a huge task to correct this so you may just want to live with it as I will do. The road wheels come with the obligatory polythene caps which I find make painting much easier. The radar systems are moveable and you can depict them raised or lowered. A single figure is provided which represents a typical 1980s US Tanker and is quite passable by today's standards.

## CONCLUSION

This is very much a one-off vehicle that Tamiya saw fit to give us. It does need some work, but Tamiya throws you a lifeline with their usual molding standards and ease of assembly. The box art sells this for me and with a UK retail price of around the £25 mark the price is reasonable. Go on, you know you want to model one shooting down one of Trumpeter's Mil-24 Hinds...

Highly Recommended. ■

Thanks to The Hobby Company Limited for the review sample [www.hobbyco.net](http://www.hobbyco.net)



Solid grab handles are so 1980s!



Inner track pad detail with flash.



Bring me my lighted candle and screwdriver...



There are a number of motorisation holes to fill.



Road wheel detail.



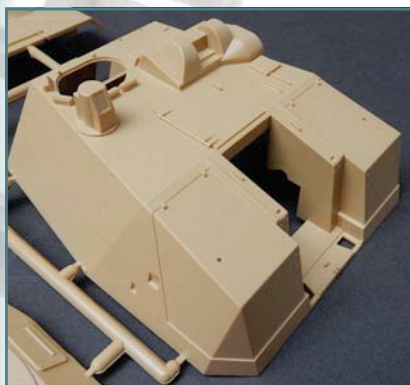
Tail light units.



The one-piece suspension arms.



Nice detail on the top of the turret.



Distinctive turret shell.



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# FATHER SON BUILD

**John Bonanni** treats us to a step-by-step painting and weathering demonstration on a model originally built by his father more than 20 years ago.

**W**hen I was a kid digging around my dad's model stash, I came across this giant green tank.

At the time I didn't know its name or who used it. All I knew is that it was monstrous. Fast forward 20 years, I found myself digging through my dad's stash again and coming across the same tank. By this time I had learned a lot more about tanks and knew it was the giant KV-2. I still couldn't believe its size, and I can't imagine how the Germans felt when they squared off with it in their Pz. IIIs and Pz. IVs. My dad started the old Tamiya kit during my childhood but never finished it. When I opened the box again I realized it was nearly ready for primer. I thought it would be the perfect gift to finish it for him.

## PICKING UP WHERE DAD LEFT OFF

Construction was very straightforward with no major issues. The holes in the bottom of the hull and sides where the motorised toy drive was to be installed were sealed with Evergreen plastic sheet.

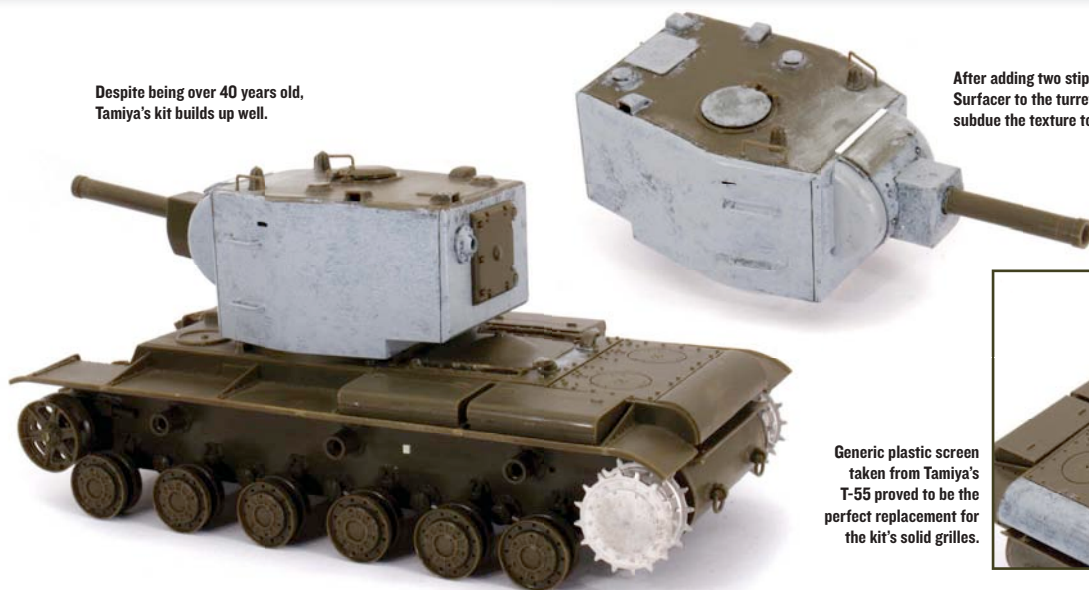
An area that needed updating was the engine deck screens. The original kit had moulded the screens solid, but I decided to open them out. After removing the solid areas with a rotary tool I added generic mesh and framed it in with stripes of styrene and photo-etch.

Additionally, I added bolts to the exhaust bases and scribed trenches on the turret for welds. The trench ran along the entire roof of the turret and on the ends of the turret sidewalls to simulate the plate connections. Next, I used Aves Epoxy Sculpt to recreate the weld beads, which is my preferred material. The water based putty is easy to use and fast to clean-up.

The last update I made to the kit was a small strip of styrene with bolts to connect the gun mantlet shroud. Before giving the KV a primer coat, I applied texture using Mr. Surfacer 1000 to all of the cast parts and large plates. The surface of the large plates was sanded to reduce the cast texture to an appropriate level seen on rolled steel. ►

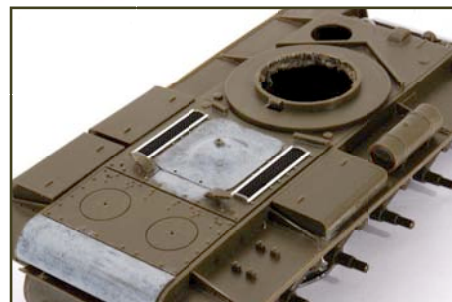


Despite being over 40 years old, Tamiya's kit builds up well.



After adding two stippled coats of Mr. Surfacer to the turret, it was sanded to subdue the texture to that of rolled steel.

Generic plastic screen taken from Tamiya's T-55 proved to be the perfect replacement for the kit's solid grilles.



I prefer using lacquer based thinner for priming.



The lacquer based thinner is durable and bites into the plastic.



Five different shades were used to accomplish the modulated finish.



AMMO primer was sprayed directly from the bottle for preshading.





This is the result after applying three shades of green.



Low tack Tamiya tape can be used shortly after airbrushing the acrylics to make the modulation process fast and easy.



The modulation finish looks similar to a 3D computer model, but will be toned down during the weathering.

#### PRIMETIME

I prefer to primer my models with an aerosol can, which I find easier and faster than with an airbrush. The brand of aerosol I consistently get good results from is called Colorplace. It's generic brand spray paint found at Walmart and costs less than \$2.00 a can. I find it sprays better and leaves a smoother finish than most hobby oriented spray paints.

Next, I gave the model minimal pre-shading with AMMO's black surface primer. I didn't go overboard at this stage because the multiple layers of paint to follow will practically eliminate these pre-shading efforts.

#### GIVEN THE GREEN LIGHT

Painting a single colour subject can be boring and dull. However, colour modulation is fun way to spice up a monotone vehicle. The basic premise behind the modulation technique is the existence of an artificial single light source. This style was developed to enhance and draw attention to details that would normally be overlooked. It is also a new spin on traditional modelling techniques of pre/post shading and dry-brushing.

The first layer of colour added is AMMO's Russian 4BO. AMMO paint is a relatively new brand of paint. It is similar to Vallejo and AK Interactive offerings. When I

researched this brand of paint I found that modellers were using Mr. Colour Levelling Thinner to thin it. I was surprised to learn this because AMMO paints are acrylic, and I assumed they wouldn't work with enamel thinner. Needless to say I was wrong. The resulting finish was smooth and tip dry was no longer an issue. After the base coat, the modulation process began by using the formulated shades from AMMO. The first step was to add the 4BO Shadow Base, which was applied to all general areas and concentrated in the corners and crevices. Next, 4BO Base was sprayed on to start the lightening process. Applying the lighter shade of green nearly

starts at the bottom of the vertical surfaces and gradually is built up towards the top of the panel. The same method is adapted to the horizontal surfaces by lightening the edges, but is much more subdued. Tamiya masking tape and Post It notes were used to protect areas from the lighter paint. The resulting finish should be a two-tone gradient from dark to light. The process will be applied two more times with the successive shades of 4BO Light Base and 4BO Highlights.

Once the airbrushing was complete it was time to move on to picking out the small details by hand. As mentioned earlier, this last stage of the technique will

Sap Green gives the model a vibrant hue.



The left panel has had a filter, but the back panel has not. The difference in hues is significant.





The bottled wash was easy to apply



The wash accentuates the shadows.



A fine brush was used for most of the engine deck chipping.

show features that are normally overlooked on a model. Bolt heads and straps no longer blend into the finish. Lighter tones of green were used in this step and varied depending on the detail. Using multiple tones allows for a greater depth of finish and will give each detail the ability to stick out. The completed modulation finish will look exaggerated, but don't worry as multiple layers of weathering will tone down the extreme finish.

#### ENHANCING THE TONES

Before weathering I always seal my models with a coat of Tamiya X-22 Clear Gloss, which I have found to be the best at protecting

paintwork and creating a smooth satin finish. Following the clear coat, an oil filter of Winsor & Newton Sap Green diluted with Humbrol enamel thinner was applied. I prefer using Humbrol thinner as opposed to mineral spirits and enamel thinner because I believe it allows the oil paint to dry faster. The intense green filter enriches the pale tone of the model. It is important to not over saturate the filter mix with oil paint. A filter coat should be roughly 10% paint and 90% thinner. Excess green filter pools on the model were absorbed with a clean brush. The filter was allowed to dry for 24 hours before

moving forward.

When the filter was dry, a pin wash using AMMO's Dark Brown Wash for Green Vehicles was applied. Using pre-bottled washes are easy and convenient. A fin tipped round brush was used to apply the wash around raised details and in panel lines. After letting the model sit for about 30 minutes the excess wash was removed by using a clean brush moistened thinner. Next, I added streaking effects with AMMO's Dark Streaking Grime. First, the solution is painted on vertical surfaces in lines and allowed to dry for 10 minutes. Next, a clean brush,

moistened with Humbrol thinner, is used to focus the lines. Never go directly over the painted on streak or the effect will be lost. Start on each side of the streak and slowly brush down towards the center, which will focus the line.

At this point I decided to add a dot filter to further enhance the modulated colours. Small dots were painted over the entire model using artist oils. Four oil colours were used which included: Titanium White, Yellow Ochre, Sap Green, and Vandyke Brown. The darker colours were focused in the shadow areas and towards



The added streaks are setting the foundation for further weathering.

Mig's AMMO Streaking Effects was used for this.



A dot filter enhanced the modulated finish.







Speckling was done using an enamel product from Wilder. If you're not satisfied with the results simply remove the speckles with enamel thinner or mineral spirits.



Rust streaks were added from some of the larger chips.



Vallejo textured earth was stippled on the outer surface...



...and the running gear.



Multiple layers of pigments added volume, texture, and a variety of colours.







Lastly, enamel products were added.



The enamel washes recreated streaks, moist mud, and oil stains.



Enamel earth effects were painted onto the surface.

the bottom of vertical surfaces, while the lighter colours were focused in the exposed areas and toward the top of the vertical surfaces. The colours were blended using Humbrol thinner similar to the previous streaking grime technique.

### FEELING CHIPPER

Chipping a model is without a doubt one of the hardest weathering techniques to master. I studied countless photos of operational vehicles to learn and understand the location and size of chips. A majority of entire vehicle photographs showed little signs of chipping. Detail shots provided the necessary reference to complete this weathering stage. The first layer of chipping was done with AK's Chipping colour, which is a darker brown colour. I felt it looked perfect on the green base coat. A fine brush and piece of sponge were used to apply the chips. If a chip was too large a #11 Xacto blade was used to remove some of the paint. This process can be long and tedious, but if well executed can give an authentic finish.

A relatively new weathering technique that is becoming more widely used is speckling. It is very simple to apply and only involves flicking paint on the model. Various mediums can be used, but I choose Wilder's Brown Rust Speckling Effect. An old flat brush held 4 inches away from the models surface proved to be the best way of application. The result is very subtle to the eye, but enhances the previous chipping.

### GETTING DIRTY

Crossing the fields of the Russian Steppe can add a lot of dirt and debris to a tanks suspension. Plaster, pigments, and acrylic gels can be used in concert to deliver a realistic appearance. The first step in adding the caked mud on the lower hull was to apply Vallejo's Dark Earth Texture, which is a pigmented acrylic gel. It dries with a satin finish. Next, a very thinned mix of Tamiya JSDF

Brown was airbrushed to remove the satin finish and create a dust base. At this stage I broke out the pigments, and worked in sections by laying the model on its side. An old round brush was loaded with a mix of pigments and tapped above the models surface allowing the pigments to fall naturally. Next, Tamiya X-20A was applied with a pipette to bind the pigments. This process was repeated several times using different shades of pigments. Lastly, AK's earth effects were brushed on to simulate moisture around the torsion bars, wheel recesses, and crevices.

After finishing the running gear, I turned my attention to the superstructure. The first layer of dust was airbrushed on using a mix of Tamiya Buff and JSDF Brown. Next, a darker dust layer was brushed on using AK's Earth Effects and allowed to dry for 10 minutes. This was then blended using a moistened brush. The final layer of dust coat was achieved by stumping and blending AK European Earth pigment onto the surface.

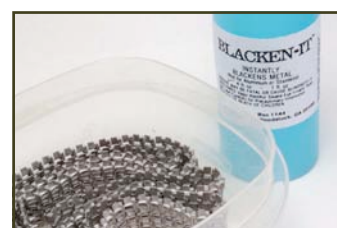
### ON TRACK

The kit supplied tracks are very basic and lacked detail on one side. They really required replacement. Fortunately, my Dad had picked up a set of FruiModel white metal tracks. His set was the early style by FruiModel that didn't require a wire for connection. They were essentially click together and only required crimping the connection point. Some of the links male sides broke, but it wasn't an issue because many spares were provided.

After the tracks were assembled they were cleaned in soapy water and rinsed off. Next, they were given a bath in a container of Blacken-It. I let them soak for about 20 minutes while softly shaking the container to remove the air bubbles from the tracks. When I removed the tracks I was really disappointed how the Blacken-It performed. They looked pale dark grey with an



The enamels were blended using a dampened brush.



After washing, the tracks were given a bath in Blacken-It.

I wasn't satisfied with what the tracks looked like after using Blacken-It so I airbrushed them with a dark earth tone.



Black pigments blended the airbrushed exhaust soot.

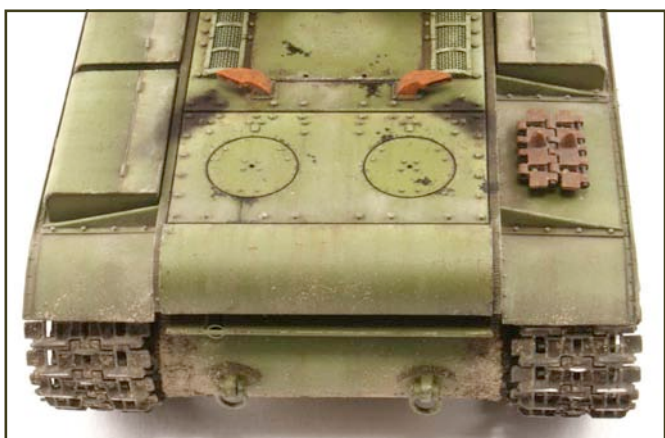


Black oil paint enhanced the oil stain effects.





The chipping, rust and fading may be seen to good effect on the engine deck.



Mud spattering on the rear of the hull.



Note the fuel stains around the filler cap.



A close-up view of the front of the vehicle.

The big rear turret hatch shows the full effects of the weathering treatment.



irregular finish. To get them where I wanted Tamiya JSDF Brown was airbrushed onto each set. They turned out great and looked like dusty steel.

Next, pigments were added using the same technique as described before on the lower hull. To complete the tracks a sanding stick was used to expose the bare white metal on the surfaces that contacted the ground.

#### THE DETAILS

At this point the model was coming together and only a few minor tweaks remained. The exhaust pipes were painted in Lifecolor's excellent rust range. These paints are perfect for simulating rust and dry dead flat. The first coat was an opaque layer of Burned Rust. Next, two lighter rust coats, Corroded Rust and Streaking Rust, were brushed on with varying levels of opacity. This layered approach allows each rust tone to show through and create a perceived texture. Dry brushing MiG Productions Light Rust and Black pigments onto the exhausts was the last step. The two spare tracks on the hull were treated the same way. Smoke soot stains on the upper hull were added by airbrushing a black base and dry brushing black pigment.

Oil and fuel stains were added using a two-step process. First, black and brown oil paints were applied to map the areas and give a darker colour base. Next, AK's Oil Stains and Fuels Stains enamels were thinned and brushed on. The turret and bow machine guns were painted black and dry brushed with AK Gun Metal pigments.

#### CONCLUSION

Despite being over 30 years old this Tamiya KV-II can still hold its ground against modern competitors. The only update required is the tracks. Sealing off the areas for motorized parts, adding welds, and opening the engine deck screens were easy fixes to bring this model up to speed. Additionally, I learned a lot of new finishing techniques and will no longer be afraid of building a boring single colour model.

This KV-II was the most rewarding model that I have ever built. It allowed me to finish something my dad started, and when I look at it on the shelf, it will remind me of the times we spent at the bench. Sadly, my dad passed away this summer after a long battle with MS. His love for the hobby will always be alive in me. I'd like to dedicate this article to him for introducing me to scale model building and all of the great times we had together. ■

### Modelspec

Tamiya 1:35 Russian Heavy Tank KV-II Gigant  
Kit No. 63

#### Accessories Used:

1:35 Friulmodel, KV-1/KV-2 Tracks ATL-10

#### Tools and Materials Used:

- Tamiya Extra Thin Liquid Cement
- Tamiya Tape
- Mr. Surfacer 500
- Evergreen Plastic Strip
- Eduard Photoetch Strips
- Tamiya Plastic Mesh
- Aves Epoxy Sculpt
- Waldren Sub-Miniature Punch and Die Set
- Iwata HP-C Airbrush

#### Paints and Finishing Products:

- AMMO Acrylic Colours - Black Primer, Russian 4B0, 4B0 Shadow Base, 4B0 Base, 4B0 Light Base, 4B0 Highlights
- AMMO Enamels - Dark Wash for Green Vehicles, Dark Streaking Grime
- AK Enamels - Earth Effects, Dark Mud, Fresh Mud, Engine Oil
- AK Pigments - European Earth, Gun Metal
- MiG Productions Pigments - Russian Earth, Black Smoke, Light Rust
- Windsor Newton Oil Paints - Titanium White, Sap Green, Yellow Ochre, Vandyke Brown, Mars Black
- Tamiya Acrylics - Buff, Clear, JSDF Brown
- Tamiya X-20A Thinner
- Mr. Colour - Leveling Thinner
- Vallejo Texture - Dark Earth
- Lifecolor Acrylics - Burned Rust, Corroded Rust, Streaking Rust
- Humbrol Enamel Thinner
- Wilder - Brown Rust Speckling Effect
- Blacken-It

- ☒ Still holds up well compared to modern kits.
- ☒ Very basic vinyl tracks.

#### Available from

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Rating ●●●●●●●●○



**“Despite being over 30 years old this Tamiya KV-II  
can still hold its ground against modern competitors.  
The only update required is the tracks...”**







Dragon has added the uparmoured version of the Panzer IV Ausf. A to its 1:35 scale "Smart Kit" lineup. The Editor takes a look.

## UPARMOURED VETERAN

The Panzerkampfwagen IV (Pz.Kpfw. IV), commonly known as the Panzer IV, was a German medium tank developed in the late 1930s and used extensively during the Second World War. Its ordnance inventory designation was Sd.Kfz. 161.

Designed as an infantry support tank, the Panzer IV was not originally intended to engage enemy armour, that role being allocated to the Panzer III. However, with the inadequacy of the Panzer III becoming apparent and in the face of Soviet T-34 tanks, the Panzer IV soon assumed the original role of its increasingly vulnerable cousin.

The most widely manufactured and deployed, fully turreted German tank of the Second World War (not including Germany's

main assault gun) at some 8,500 examples, the Panzer IV was used as the basis for many other fighting vehicles, including the Sturmgeschütz IV assault gun, Jagdpanzer IV tank destroyer, the Wirbelwind self-propelled anti-aircraft gun, and the Brummbär self-propelled gun.

The Panzer IV saw service in all combat theatres involving Germany and was the only German tank to remain in continuous production throughout the war, being in production from 1936 and 1945. Upgrades and design modifications, intended to counter new threats, extended its service life. Generally, these involved increasing the Panzer IV's armour protection or upgrading its weapons, although during the last months of the war, with Germany's pressing need for rapid replacement of losses, design changes also included simplifications to speed up the manufacturing process.

The Ausf. A was the initial production model, commencing production in 1937, and only 35 were built in total.

The Ausf. A was protected by 14.5 mm (0.57 in) of steel armour on the front plate of the chassis, and 20 mm (0.79 in) on the turret. This was only capable of stopping artillery fragments, small-arms fire, and light anti-tank projectiles.\*

Not surprisingly, additional armour was retrofitted to the surviving vehicles after the French campaign. At least some of these vehicles saw later service on the Eastern Front.

This kit is based on the 2012 Dragon Panzer IV release, kit no. 6747. The main differences are the inclusion of full-length flexible DS Tracks instead of the original Magic Track individual links, plus the addition of photo-etched applique armour.

The kit features a typically high parts count and will yield a

large harvest for your spares box. Assembly will follow the general layout of other kits in the Dragon Panzer IV family. Experienced modellers should have no trouble, but you will need some additional reference to help with the exact configuration of your subject vehicle. Options including the drive sprocket, Notek light and antenna deflector on the barrel are included in the box but not mentioned in the instructions.

Surface textures moulded to the main surfaces are outstanding, including tread plate on the top and bottom surfaces of the track guards. I really like the recessed screw heads on the roof of the turret as well.

The turret has a partial interior including the floor, traverse gear, breech with shell basket, gunner and commander's seats, vision flaps and blocks. This will be more than adequate if you want to pose the turret side doors open.

The instructions do not seem to refer to the installation of the tracks at all, but they are the oft-maligned DS flexible lengths again. There are just a few crushed guide horns on my sample, and these will easily be hidden between the road wheel halves.

The detail of the tracks is really quite good, even offering hollow guide horns, but that is not the point with "dead" tracks typically seen on German vehicles. The DS Tracks simply cannot offer a convincing sag between return rollers.

By all means Dragon, please continue to supply full-length DS tracks for Shermans and other vehicles with "live" tracks that do not sag, but please please consider reintroducing Magic Tracks for German vehicles.

This is another high quality release of a rare and interesting vehicle. ■

Thanks to The Hobby Company Limited for the review sample [www.hobbyco.net](http://www.hobbyco.net)



The rather snazzy one-piece dustbin cupola.



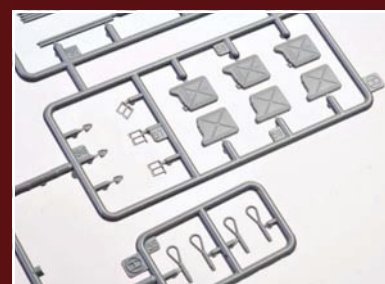
The upper hull piece.



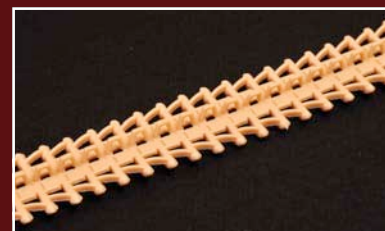
Nice treadplate detail on the track guards. This extends to the lower surface too.



Some of the interior turret detail.



Fodder for the spares box!



Hollow guide horns on the DS Tracks.



The additional armour is supplied on a thick fret of photo-etched metal.

The lower hull is supplied as a tub (almost).



The one-piece upper turret shell.



I like the screw head detail on the turret roof.



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# SEE HOW THEY RUN *PA*





## PART TWO – DIORAMA BASE AND ADDITIONAL FIGURES



**Radek Pituch** adds a landscaped base and a German jockey to Dragon's 1:35 scale T-34/76 Beutepanzer conversion.

**T**he gunfire fades as the morning mist rises towards the sky and reveals the Soviet attacking force withdraw after a skirmish with German troops. A lone beute T-34 stops as the crew wants to open the hatches and get some fresh air.

The sound of hooves is getting closer and finally a mounted tanker from a nearby tank group arrives to bring some orders for the T-34 crew. They discuss the situation and observe the withdrawal of last Soviet troops.

### SCENERY

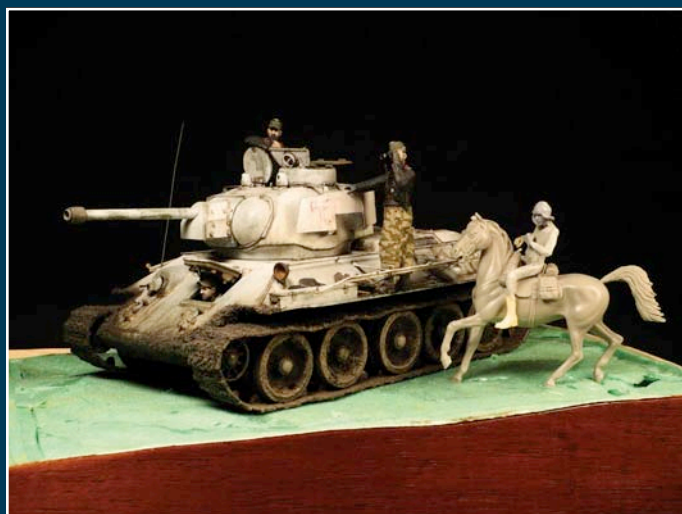
After finishing my tank model it was the right time to build some scenery for it. As for me, a vehicle needs to be placed in some context to make it look more complete. Since my idea was to paint an almost perfectly white vehicle I decided I will apply no snow effects on the base to contrast the tank. As of historical context and terms of reality a good explanation to this might be that the crew was obliged to paint their tank for the upcoming winter conditions before they went into action, as the snow may fall any time soon.

For the non-believers, it is just a matter of finding good photo evidence of such practice, as seen for example in Peko's StuG on the Battlefield book in which there has been published a series of photos of perfectly white StuGs from 1. Ski-Jaeger Division operating in open field whilst no snow is present in the surrounding area. So having this idea in mind all I had to do was to think of an additional figure for the scene, adding some dynamics to the whole composition. ►





Here is a mock up of the rider figure positioned on the Minisoldiers horse. The head comes from Alpine Miniatures Waffen SS Tanker figure at Kharkov (the one that goes together with their Max Wunsche).



The whole arrangement of the scene. It was obvious to me that I should arrange everything the way to give more dynamics to the scene so a slightly sloped terrain and the additional figures helped create the illusion of movement.

#### ◀ HERE COMES THE CAVALRY

The choice was quite easy - a mounted figure would do the trick and moreover I had a perfect candidate for this purpose in my stash. The Minisoldiers of Russia offering - a Soviet Cossack figure with a beautiful horse figure sculpted by Andrei Zlobov was my choice. I only had to sculpt the rider - a German tankerman from a nearby unit that decided to use a captured Soviet horse to get in touch with other tank crews in the area.

#### GROUNDWORK

As for the groundwork I decided to go with the weathering that was already applied to the suspension of the tank - so dark soil and thick grain lumps of earth and some grass around the tank. To achieve the effect of moist in the soil I added a lot of MIG Productions' Wet Effects and Damp Earth. I must state here that as for the groundwork, I first applied a layer where the tank was going to be positioned and then I pressed the tank into the yet wet paste.



The initial layer of groundwork was done with thick grain wood putty. This covered all the gaps in the depron foam I used for creating the final layer of the base construction.

The rider figure with more Magic Sculpt added to his body. As you can clearly see the pose shows movement of the body as he would be balancing while the horse moves.







Mixing the compounds for the groundwork paste with a palette knife.



The ingredients as follows: Vallejo's grain paste Dark Earth colour, Vallejo pigments – Dark Slate Gray and Carbon Black, static grass and powdered plaster. You don't need any water here.

After the layer dried I started working further. Another thing worth recreating on the base was some loose earth around the tracks of the tank, as if lumps had fallen from the tracks while the tank was rolling. To do this I used the same mixture as for the groundwork but waited for the paste to dry a little bit and then scraped out the "lumps" from the bottom of the vessel where I was mixing the ingredients earlier and applied them randomly around the tanks tracks.

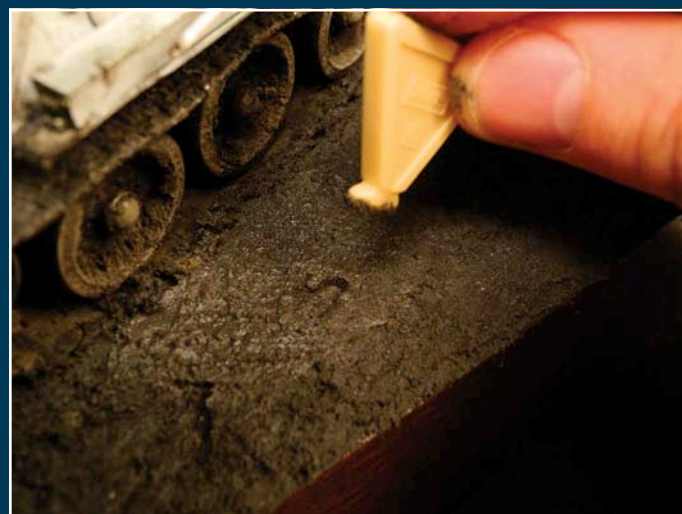
As for the grass, I wanted to add some faded green and brown colours so my choice was mixing two short grass types from Woodland scenic. I used this for the short grass. For the taller parts, since in my scene is still before the snowfalls the grass, although already brownish and dry, it still stands straight (in contrast to making a post-winter scenery we should do the grass as flat and broken as possible, due to the layers of snow overwhelming the straws). ►



Applying the paste.  
The soil-like texture  
is clearly visible.



I used a rounded tip tool to add some horseshoe tracks on the groundwork.



...and some shoe-stamps from Calibre35





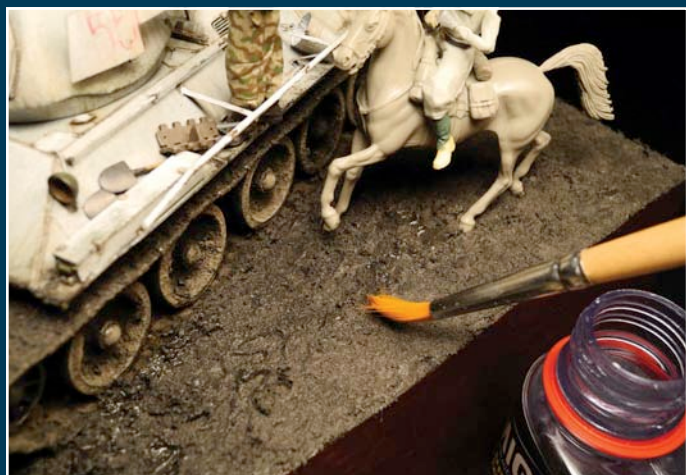
With a bit of work the tank blended in perfectly with the groundwork.



The same tool as in Step 07 was used here to create some loose lumps of earth that fell from the upper run of the track while the tank was still rolling.



Wet effects solution from MIG Productions with its glossy appearance helped to add some moisture effect to the groundwork



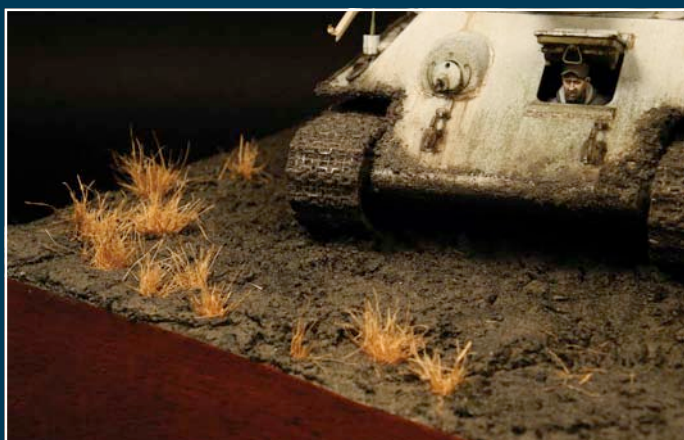
The process was repeated here as well, this time with a brush.



Wild grass-balls. I used these to add some tall grass to the base. They were all installed in place with tweezers



Here you can see how it was done. I simply grabbed some tufts and pressed them into the groundwork. The paste has a rubbery structure once dry and may be punctured with a bit of force.



Remember to plant the tufts as randomly as possible to create a more natural feel for the base.



The tufts were then fixed again with the solution from MIG Productions. Here you can also see I added some short grass (Woodland Scenics). This was done with the Noch Grassmaster device.





The overall configuration.



The grass blended in to the groundwork as well as the tank.



Applying some extra earth effects.



The rider ready for some paint.



Some close-ups of the rider and the horse figure.



Prior to painting I always smooth the surface of figures with steel wool. This allows me to remove any imperfections of the surface.





Painting gets underway on the horse and figure.



Close-up view of the grass.

**“The sound of hooves is getting closer and finally a mounted tanker from a nearby tank group arrives to bring some orders for the T-34 crew...”**

#### CONCLUSION

So, as you can see, there are many small different factors worth taking into account while building dioramas that make the scenes look complete and realistic.

Although in the case of this scene the scenery is very simple, basic to say the least, it places the model into the conditions of war and supplements it with additional context.

Happy modelling! ■

#### Acknowledgements

I would like to thank Andrey Grechkin for providing me with the Minisoldiers figure and Claude Joachim who generously gave me some wild grass-balls once we last. Thanks guys.

#### Mini Modelspec

Dragon 1:35 T-34 /76 Mod. 1943 "Formochka" w/Commander's Cupola. Kit No. 6603

#### Accessories Used:

Minisoldiers Horse  
Alpine Miniatures Waffen SS Tanker figure at Kharkov

- ✓ Good detail; excellent moulding.
- ✗ Unusual wheel configuration.

#### Available from

All good model shops Worldwide.  
Dragon kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Rating ●●●●●●●○



The horse and rider painted and in place.



A view from the other side of the tank. The contrast between the long and short grass may be seen here to good effect.







# MEDITERRANEAN PATROL





Detail was ground off the YS hull from the wheelhouse forward.

## Brent Simpson improves Y S Masterpieces' large 1:35 scale Thornycroft 55 ft Coastal Motor Boat with scratch building and after market parts.

**T**he Thornycroft 55 ft Coastal Motor Boat (CMB) was a pre war design based upon the 40 ft designs built by the same company during the First World War. The class carried two 18 inch torpedos that were pushed out of the stern by rams and then sank to a pre determined depth before running on to their target.

Thornycroft built 12 of this class of vessel during 1940 for foreign Navies, however these orders were transferred to the Royal Navy due to war time needs and served mostly in the Mediterranean theatre.

Four of these boats were sunk by German aircraft during the battle of Crete. One of these is the subject of this project - MTB 213. One can only imagine how the five man crews of these archaic boats felt being assigned to them while 70 ft Vosper designs were rolling of the production lines!

### THE YS KIT

YS Masterpieces of Greece produce fine kits in resin. Their range includes ships in both 1:700 and 1:350 scale, figures and two large scale motor torpedo boats, the subject of this article and a Soviet Tupolev.

The YS Masterpieces 1:35 scale Thornycroft 55 ft CMB is an all resin kit. The main hull is an impressive, heavy casting to which are added numerous smaller castings enabling the modeller to construct a Greek navy vessel from the box. Parts are also included to enable a German operated,

captured Greek vessel to be modelled.

The kit is not without its faults. The instructions in particular could use some improvement. They consist of a series of rather poorly reproduced photographs showing a kit under construction and at no time is a finished kit is shown.

The pistons that push the torpedos out of the stern troughs and that run through the wheel house are missing, some of the smaller castings are poorly formed (the torpedo fins in particular) and no extras such as rigging thread are included, a small point maybe but this is a 200 plus euro kit.

References are scarce for this class of torpedo boat. One photo showing the rear three quarters of MT 213, along with a colour profile appear in the New Vanguard title "British Motor Torpedo Boat 1939-45", this reference is all that I could find despite hours of searching.

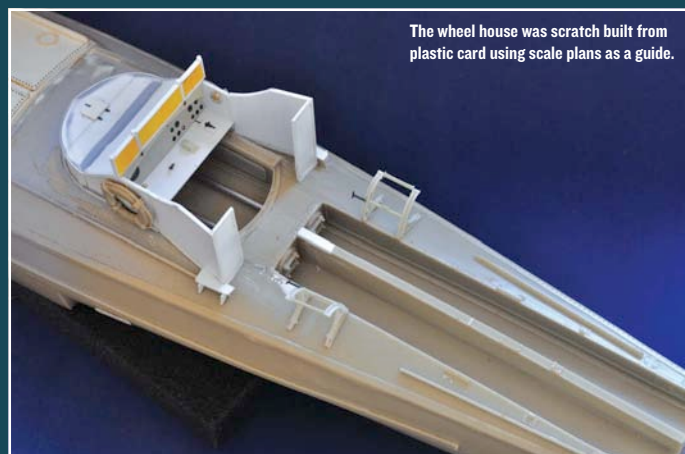
In the New Vanguard title MTB 213 sports an interesting camouflage scheme so I decided that this was the vessel that I wished to model.

I figured that the conversion wouldn't be too difficult, sure the wheelhouse was a different shape but it looked like it was mostly flat panels, fix that and I would be 90% done.....I was wrong!!

I became aware of the amount of work that would be needed when I obtained a set of the excellent John Lambert scale plans depicting the exact class of boat that I wanted to model. These plans are redrawn from official MOD ►



The large hatch on the bow was filled.



The wheel house was scratch built from plastic card using scale plans as a guide.



This was detailed with a pair of Accurate Armour life preservers and bits and pieces from the spares box.

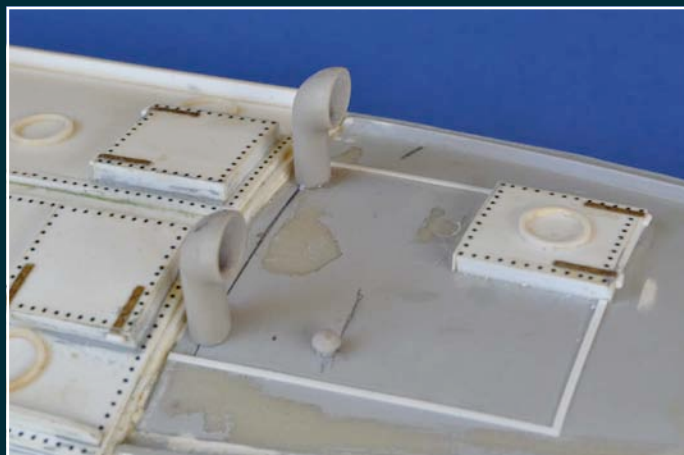




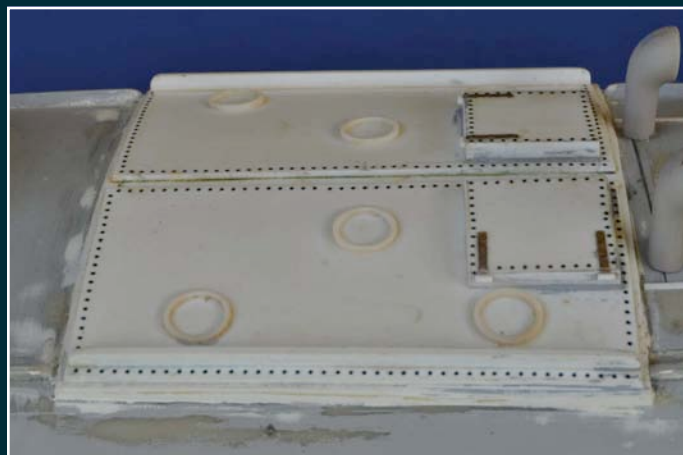
Engine instruments, a morse key throttle quadrant, torpedo director and navigation lights were added too.



The exterior of the basic wheel house assembly.



Detail view of the bow.



The large bow hatch.

◀ drawings and matching them to the photo in the New Vanguard book showed that they are very accurate.

It became clear that I would be able to use the YS hull, (although heavy modification would be needed), the torpedos and some of the smaller fittings, but other than these components everything would be needed to be scratch built.

## GETTING STARTED

After consulting my plans it was clear that all detail would need to be ground off the YS hull from the aperture where the wheelhouse would sit, forward, as the layout on MTB 213 was completely different from that supplied. A large hatch on the bow would need to be filled, the exhaust outlets on the hull sides had to go and be replaced with the British style. So with heart in mouth (did I mention that this was a 200 euro kit!) it was out with the Dremel and on with the dust mask!

I ground off all of the old detail and then filled the unwanted hatch and any over enthusiastic Dremel scars with White Milliput and several layers of Mr Surfacer 500 until all was smooth. Some fine plank detail was lost in the process however my plans indicated that these areas would eventually be covered in 'Semtex' anti slip coating (no not the eastern

European explosive!).

I rebuilt all of the lost detail with sandwiches of plasticard and strip, and reproduced lines of fine rivets by utilising the excellent Archer Fine Details surface effects decals. These decals performed well but had a nasty habit of breaking into smaller pieces than I wanted but even so they saved hours of punch and die time and look great under paint.

After rebuilding and drilling new exhaust outlets it was time to get moving on the wheelhouse.

## MOVING ON

Scaling the wheelhouse to 1:35 from my plans, I built the Royal Navy version from plasticard and detailed it with a pair of Accurate Armour life preservers and bits and pieces from the spares box, adding fire extinguishers, engine instruments, a morse key throttle quadrant, torpedo director and navigation lights. The pistons that run through the space were reproduced with lengths of aluminium tube, I then built the wind shield and masked it up for later painting.

Moving towards the stern, I built a mount that on my plan shows as stowage for a smoke float. My photo reference shows that 213 used this to mount what looks like some sort of life raft. Both the

mount and raft were constructed from plasticard and waxed string.

Continuing towards the stern, the torpedo launching rails (the tail to you and me) were added from plasticard and brass rod and new rudder linkages built from brass stock. It's just a shame that they ended up underwater but as they say, I know that they are there!

## FURTHER DETAILS

The bipod mast was constructed from plastic stock for the bipod with the upper mast and yard turned to a taper from brass rod in my trusty Dremel. I then added the smaller details such as the cleats and loops for the halyards and put the assembly aside until the final stages of construction.

At this point I realised that I would need some extra parts from YS. My version had an extra set of 'hoops' over the torpedoes and some extra cone shaped vents which were used to allow the fuel tanks to ventilate. A quick email to Yiannis from YS and the parts were in the mail - wonderful service!

Construction finished by replacing the torpedo fins with Revell items, adding cowl vents to the bow salvaged from a Flower Class Corvette, boat hooks from brass rod with plastic stock mounts and Revell hooks (sorry Vosper!), fuel filler points punched from

plasticard and flag staffs from brass rod with plastic details.

## TIME TO PAINT

Painting began with a coat of Tamiya grey primer straight from the can. This initial coat served to unify all of the different materials used in the construction process and check for flaws.

I really like Tamiya's grey primer. It has never failed me and is a great base for the painting stages to come.

I then masked around the areas that would eventually be covered with the Semtex anti-slip and sprayed Mr Surfacer 500 keeping the can about 30 centimetres from the area to be covered. This resulted in a slightly rough texture that reproduces the anti-slip surface nicely.

I usually like to paint in acrylics as I feel that they spray nicely and make the weathering process easier due to the fact that enamel washes can be easily applied over them. In this case, I really wanted exact matches to the colours used by the Royal Navy and so I turned to the excellent Colourcoats range produced by White Ensign Models. These paints are enamels and perform very well as long as they are thoroughly stirred before use.

The first colour shot from my trusty Aztec airbrush was AP 507C



'Admiralty Light Grey'. This was then masked with Tamiya masking tape and the next colour, AP507A 'Dark Admiralty Grey', was applied followed by MS1 'Very Dark Grey'.

I was unsure of the colour of the Semtex anti-slip and so inquired over the Internet. John from WEM informed me that during the early years a creamy yellow was used later changing to green. John recommended the Colourcoats shade of 'Modern Russian Light Stone'. This colour was duly ordered and applied to the relevant areas.

Finally, the waterline was masked and a scale black applied which I mixed from Tamiya XF-1 Flat Black and XF-64 Red Brown.

The masking was then removed to reveal the completed camouflage scheme.

The next stage involved spraying an acrylic gloss coat to seal the WEM colours and allow the use of an enamel wash. I used the version produced by Vallejo that worked well. At this stage I applied the '213' to each side of the bow using Archer Decals rub down numbers that I managed to find in the correct style and size.

I started the weathering process by applying MIG Productions neutral wash all over the kit. This wash was perfect for the predominantly grey vessel, not too

dark but enough to pop out the detail. The Semtex areas received MIG's Dark Wash as these areas would have had high use and would have gotten fairly grubby.

Finally, a coat of Vallejo Flat Varnish returned a lustreless finish to the vessel.

Before I proceeded any further I decided that it was time to mount the kit onto a base as it is a big and heavy model and continued handling was risking breaking bits off, so it was time to face the challenge of constructing a realistic sea- scape.

### THE BASE

From the start I wanted to show MTB 213 cruising at speed 'on the plane'. This would be no easy task to pull off, however I was inspired by an article that I read in TMMI issue 123, January 2006 in which Stefan Bernet produced some incredible water effects on an Amtrack diorama. I re-read this article and used some of the techniques mixed with some of my own.

I first constructed a rectangular box from timber, added a moulding around its bottom edge and placed a false bottom about 20 centimetres from the top edge.

The space between the false bottom and the top of the box was

filled with green florist's foam.

I then carved out a void in the foam into which I test fitted the kit. Once happy with the fit, I removed the kit and covered the foam with ready mixed Pollyfilla (a DIY material designed to fill cracks in plaster etc). This served to seal the fragile foam and provide a base for further effects. I didn't attempt to form waves or wakes at this stage, just to seal the foam.

The kit was placed back onto the base once the Pollyfilla was dry and bow waves formed from A and B putty ensuring that they curled realistically and moulded nicely to the sides of the boat. Once I was happy, the kit was once more removed.

The entire base was covered with acrylic gel medium that, when dry, was first brush painted with a base coat of Paynes Grey acrylic, followed by several shades of blue and grey airbrushed in Tamiya acrylics.

I then poured a generous amount of acrylic medium over the base and not wanting brush marks, I used a hairdryer set on cold to spread it around. Once dry the kit was permanently fixed to the base.

Foamy wakes were formed from cotton wool teased out and soaked in a white glue and water mix and then covered in acrylic medium

once they had gone hard.

The splashing water at the rear of the boat was made from bits torn off a white scourer that was super glued where necessary. Every fibre of the scourer then needed to be coated in acrylic gel to obtain a realistic splashing water effect.

### FINAL DETAILS

Now that the kit was attached to the base I could add all of the final details.

I painted the steel sections of the torpedo's in several Alclad shades with the warheads in grey and attached them in their wells.

The White Ensign is from Accurate Model Parts and is one of the best scale flags that I have seen. I used their 1:48 scale item as the 1:35 version is just huge!

Lewis guns from Resicast were added to scratch built mounts, painted and placed on the bridge wings

ADV Azimut offers a set of resin figures for the Italeri Vosper MTB. I adapted these by swapping body parts and adding a Hornet head to the skipper. All were painted in oils and added to the kit at the same time that I attached the mast.

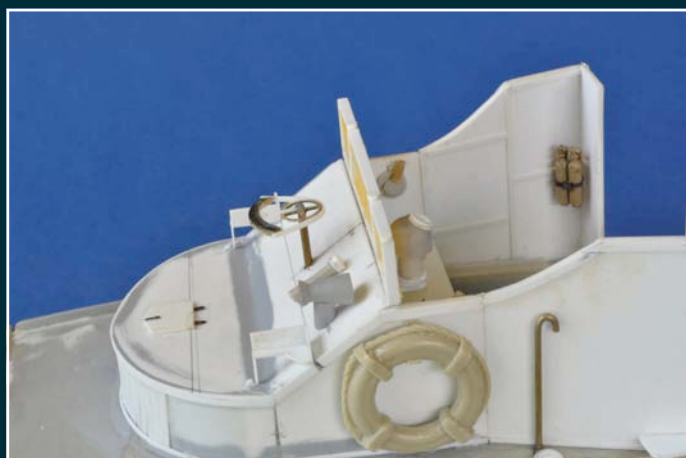
Rigging was achieved by using a combination of Cottage Industry Miniatures CIM rope, which is a non



Close-up view of structural detail added to the interior of the wheel house.



Cowl vents were salvaged from a Flower Class Corvette.



The scratch-built wheel house viewed from the port side.



After a coat of Tamiya Grey Primer, the camouflage colours were selected from the Colourcoats range produced by White Ensign Models.



Figures were adapted from a resin set by ADV Azimut.



I adapted these by swapping body parts and adding a Hornet head to the skipper.



The splashing water at the rear of the boat was made from bits torn off a white scourer that was super glued where necessary.



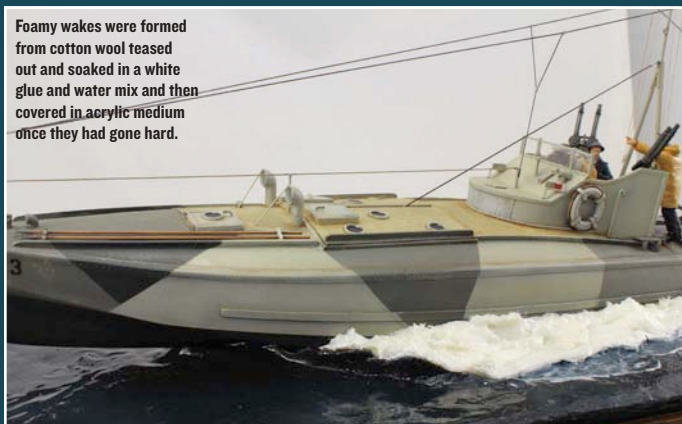
Torpedo fins were replaced by Revell items.



Rigging was achieved by using a combination of Cottage Industry Miniatures CIM rope and smaller ropes from waxed rigging string and small diameter wire.



Foamy wakes were formed from cotton wool teased out and soaked in a white glue and water mix and then covered in acrylic medium once they had gone hard.



The weathering process included an application of MIG Productions neutral wash all over the kit.





◀ fuzzy, stretchy string perfect for rigging large scale ships. Smaller diameter ropes were recreated with waxed rigging string and small diameter wire.

All rigging attachment points received turnbuckles fashioned from small diameter brass tube.

#### FINISHING OFF

The project was finished with the application of spot washes and general chipping and weathering along with the odd touch of flat varnish to kill off any errant glue spots.

#### CONCLUSION

This was a very satisfying project, on and off two years work and the most scratch building that I have ever had to complete.

The YS kit has a lot of potential and can be made into a handsome model with a bit of elbow grease and the water effects were a real challenge.

I must thank my good friend and clubmate Michael Drover for taking the photos of the finished kit. ■

**“One can only imagine how the five man crews of these archaic boats felt being assigned to them while 70 ft Vosper designs were rolling off the production lines..!,,**

### Modelspec

YS Masterpieces 1:35 scale Thornycroft CMB

#### Accessories Used:

- Accurate Armour 1:35 Naval accessories (life preservers)
- Resicast 1:35 Lewis Guns
- Cottage Industry Miniatures CIM Rope
- Accurate Model Parts 1:48 Royal Navy White Ensign
- White Ensign Models Colourcoats AP507C, AP507A, MSI, Modern Russian light stone
- ADV Azimut 1:35 Vosper MBT crew

✓ A lot of potential to be made into a handsome model.

✗ Poor instructions and some badly cast pieces.

#### Available from

Y S Masterpieces models are available online from their website [www.ysmasterpieces.com](http://www.ysmasterpieces.com)

Rating ●●●●●●○○





# TALES FROM THE CRYPT

Tamiya 1:35 L.R.D.G. Command Car & Breda 20mm AA Gun • Kit No. 89785



## L.R.D.G. COMMAND CAR

Back in 2009, the Editor teamed up with Chris Wauchop to convert Tamiya's re-released 1:35 scale LRDG Chevy to a desert gun truck.





This was a fairly simple conversion, but it has a major impact on the overall look of the vehicle.

**T**his month we are taking a sentimental journey back to 2009, when Chris Wauchop and I teamed up to create an L.R.D.G. gun truck armed with a Breda 20mm AA gun.

The Long Range Desert Group used a number of vehicles for reconnaissance and raiding operations behind enemy lines in North Africa during the Second World War. The 30 CWT 4 x 2 truck manufactured by Chevrolet of Canada was one of these vehicles. It was effectively a desertised version of the standard commercial lorry. Modifications included the installation of heavier suspension, desert tyres, sand mats and sand channels, plus a condenser to

recycle and conserve radiator fluid. The LRDG took delivery of the Chevrolet 30 CWT from May 1942, supplementing their Chevy 15 CWT trucks that had been sourced from the Egyptian Army.

Tamiya's 1:35 scale Long Range Desert Group 30 CWT Chevrolet Truck was originally released as kit number 92 in the Military Miniatures series during the 1970s. In 2009, they included a new towed 20mm Breda Anti-Aircraft gun moulded by Italeri. The Breda M35 cannon was used both as a standalone weapon, but also as the main armament of the L6/40 light tank and the AB.41 and AB.42 armoured cars. The Breda M35 had a rate of fire of up

to 240 rounds per minute, with an effective ceiling of 5,500 metres. Used against ground targets with armour piercing ammunition, the Breda M35 could penetrate up to 30mm of vertical armour at a range of 500 metres. These guns were frequently captured and used by the L.R.D.G. as a towed weapon or sometimes mounted on the tray of the truck.

#### TIME TRAVEL - BUILDING A 1970S KIT

The model was fast and easy to build. I did replace the vinyl tyres with Hussar's excellent resin parts. These proved to be a click-fit on Tamiya's wheel hubs.

I was concerned that the multi-part forward body would suffer

from fit problems, but there were no gaps whatsoever. The rear cargo section was similarly co-operative.

At this stage I decided to convert the model to a gun truck with the Breda mounted in the cargo tray.

#### BREDA 20MM

Italeri's 1:35 scale Breda M35 20mm cannon includes the gun itself, the mount and the trailer. As the gun was to be mounted in the back of the truck, I did not need to completely assemble the trailer.

Assembling the gun was quite straightforward. The trailer was partially assembled without the wheels and the trailing legs. ►



# TALES FROM THE CRYPT

Tamiya 1:35 L.R.D.G. Command Car & Breda 20mm AA Gun • Kit No. 89785



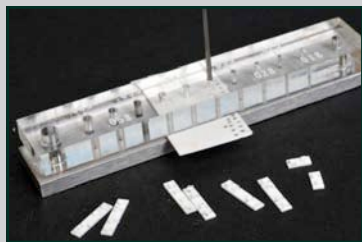
The kit wheel hubs are a snap fit for the resin tyres. The detail on the resin parts is finer than the kit's vinyl equivalents.



If the glue is applied sparingly, the gun sight will elevate with the gun.



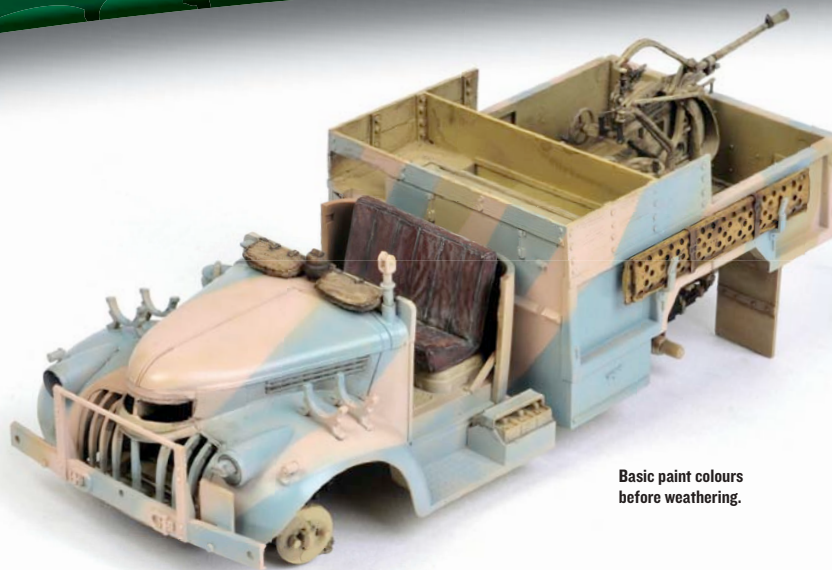
The scratch built sidewalls and bulkheads.



The timber planks were detailed with vertical supports and punched bolts.



The conversion complete, with the sub-assemblies fitted prior to gluing.



Basic paint colours before weathering.



Chris added woodgrain texture to the box with the tip of a hobby knife. The grain effect on the rough plank sidewalls has also been brought to life with an enamel wash.



The spare vinyl tyres were put to use as additional stowage.

## GUN TRUCK CONVERSION

Now it was time to prepare the Chevy's cargo tray for the Breda gun. I first sliced off the existing raised section of the cargo sidewalls by etching a cutting line with a scribe, and finished off the job with a sharp hobby blade. This would have been easier if I had done it before assembling the cargo tray! After measuring the width of the tray, both between the rear wheel wells and the full width at the top, a bulkhead was cut from plastic card. Upper sidewalls were replaced with longer sections of plastic strip cut to the appropriate height and length. The strips were detailed with wood grain texture, applied by grazing the teeth of a fine razor saw several times along the smooth plastic surfaces.

The planks were further detailed with .030" diameter bolts punched using my Waldron Micro Punch and Die set.

Upon test fitting the Breda's trailer mount in the back of the tray, I was delighted to find that no modifications were required. The trailer mount sat quite happily over the existing raised locating position

at the rear of the cargo for the Lewis gun. The trailer mount was simply glued in place.

The kit's Lewis gun is nicely done. It seemed a shame not to use it so I relocated the mount in front of the passenger's seat.

## PAINTING

Chris painted and weathered the model, choosing Tamiya XF-60 Dark Yellow to represent BSC. No. 61 Light Stone. This was sprayed inside and outside the vehicle.

The disruptive colours chosen were Desert Pink Z1, and a faded version of Azure Blue. Desert Pink was mixed from Tamiya acrylics XF-2 White, XF-52 Flat Earth and XF-7 Red. The faded Azure Blue was Gunze acrylic H67 RLM 65 Light Blue. The exterior of the vehicle was masked with Tamiya tape to duplicate the hard edges of the full-size camouflage scheme. The driver's cab and inside of the cargo tray remained in their Light Stone base colour.

With the weathering and decals complete, the model received two thin coats of Polly Scale Flat. The colours looked much more

believable now. The sub-assemblies were now glued together too, although the gun was left unsecured to rotate on its mount.

Chris also painted up the ample stores provided in the kit.

## CONCLUSION

This remains one of my favourite military projects. Don't let its vintage put you off - Tamiya's LRDG Chevy builds up beautifully with no filler required, but some care is required when aligning the suspension components.

There is plenty of potential for customising this model too, both in terms of configuration (for example, as a gun truck or rearranging weapons) and camouflage. As far as LRDG camouflage is concerned, the sky's the limit!

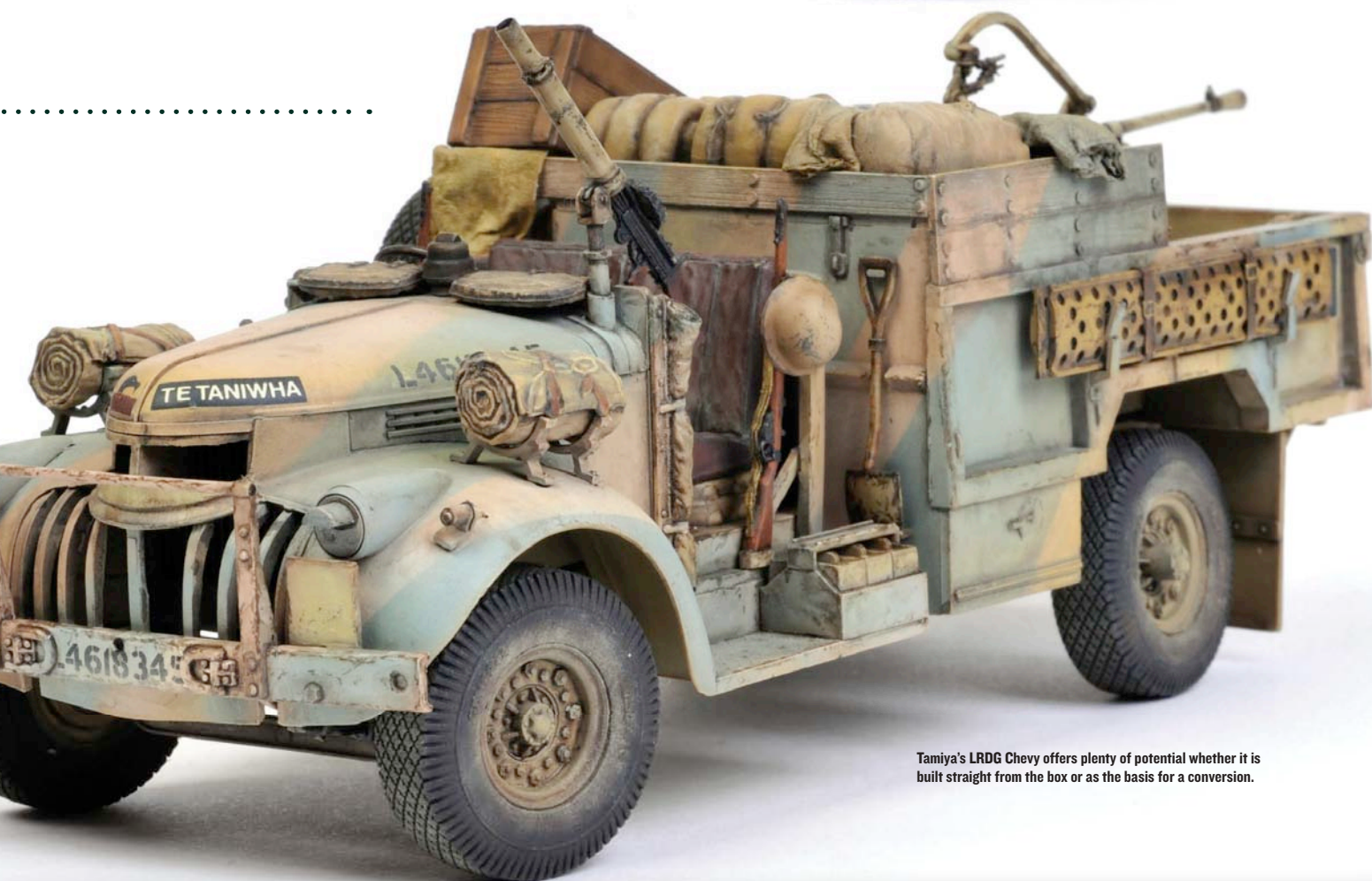
If you would like to find out more details, the full article and many more images are in Issue 43 of Military Illustrated Modeller magazine. ■

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)





Tamiya's decals looked a little thick on their backing sheet but performed perfectly on the model.



Tamiya's LRG Chevy offers plenty of potential whether it is built straight from the box or as the basis for a conversion.





# Book Reviews

## NUTS AND BOLTS - VOLUME 33

### LE.F.H.18,GWI II FÜR LE. F.H. 18/2 „WESPE“ AND „HUMMEL-WESPE“

BY HEINER DUSKE, DETLEV TELISTEN AND TONY GREENLAND

I have a friend who did not have enough information on a particular German subject that he wanted to model. He had searched the web, downloaded the information, printed it and had it all on hand ready to start. When I found out what he was modelling I lent him my copy of the subject in the "Nuts and Bolts" range of books. He later confessed he simply threw out all the information he had collected and relied solely on the book I had lent him. That's what the "Nuts and Bolts" series of books are - a one stop reference source.

This new reference work has some 185 pages. The book is logically broken down into segmented parts.

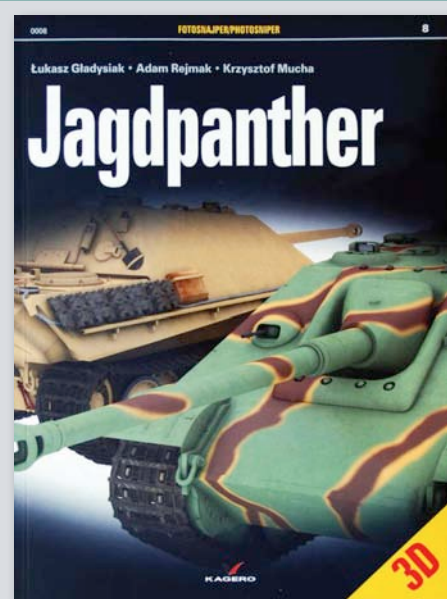
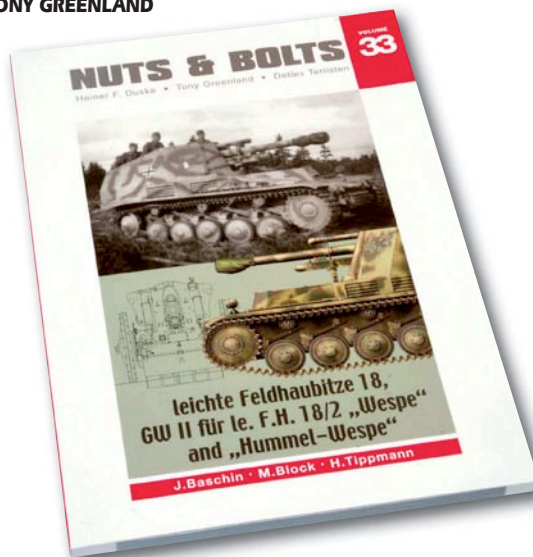
The first 49 pages are devoted to firstly the development and history of the Field howitzer itself and then it's adaption to Pz. Kpfw. II chassis. Within this section, subsections discuss the development and technical description, followed by the differences between the prototype and production vehicles. A very useful chart describes how many were made and what units they were assigned to. The book is jammed packed with details like the variations of the weapon system itself and how they were used in the field. I particularly liked the chart describing the set up of a typical unit and all the vehicles that supported them. The next 67 pages is lavishly illustrated with a little over 59 black and white period photos of the howitzer and 127 photo's of the "Wespe" in again, period service.

The next 15 pages are devoted to very well drawn 1:35 scale plans of all the known versions. John Rue never disappoints with his drawings and the three dimensional drawings just add to the experience. Twelve colour profile drawings follow over the next 6 pages and are wonderfully executed and presented. What I like about these profiles is that within the profile itself, a small black and white period photo of the relevant vehicle. This, I believe should be the industry standard. The last page of colour profiles deals with the various ammunition used together with a converted Wespe used for carrying ammunition profile.

The next section 8 pages consist of 26 colour walk around photos of the howitzer followed by 29 pages consisting of 90 again "walk around" photos of the Wespe. The entire vehicle is covered from the interior and engine through to a detailed study of the radio's fitted. The last 12 pages are devoted to model builds.

In my opinion, this is the best reference source I have come across for this weapon type. It strikes the right balance between historical fact, photo coverage and high quality colour profiles. For me, it is all I would ever need reference-wise. It includes information that is easy to digest and presented in a logical manner. Reference doesn't come much better than this. I must confess I love these books they offer convenience of just grabbing them. In reality, these books are more like four traditional books in one, a development history, wartime photo coverage, line drawings and colour profiles and a comprehensive walk around photo essay Highly Recommended.

Nuts and Bolts publications are available online from their website [www.nuts-bolts.de](http://www.nuts-bolts.de)  
**Luke Pitt**



## JAGDPANTHER

KAGERO PUBLICATIONS

ISBN 978-83-62878-83-3

BY LUKASZ GLADYSIAK, ADAM REJMAK AND KRZYSZTOF MUCHA

No other German Panzerjager instilled as much respect and fear in Allied tankers than the Jagdpanther.

An aesthetically pleasing design, it incorporated all of the lessons learned from the ill-fated Elephant. The Panther chassis mated to arguably the best anti tank gun in existence (namely the 8.8 cm Pak 43/3 L/71) produced a defensive weapons system that was to all intent and purpose almost impossible to knock out frontally at long to medium ranges.

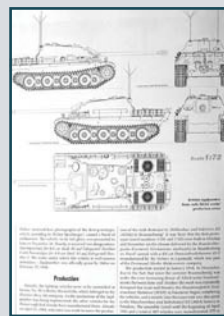
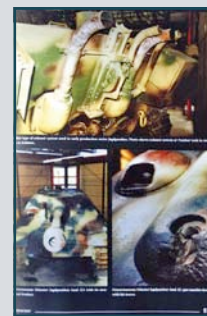
This new book from Kagero consists of 107 pages. This reference work begins with history and background of the design. It's an easy read and moves along quite nicely. I found the table of ordered tanks to be insightful as I had not realised how few of these were made. A mere 382! 84 photos cover almost every aspect of the vehicle. 39 pages are devoted to 1:35 scale drawings that cover most of the known versions. 30 pages are devoted to coloured three dimensional drawings and cover almost any angle you could think of. The last three pages include six side profile camouflage renderings and are very well done. The drawing quality is first class and is a modeller's delight.

In summary, this is a wonderfully motivational book. It has all the detail you would need. The only negative that I can see is some of the photos are not of the highest quality and the amount of three dimensional drawings lead me to believe some were inserted just to increase the page count. Nevertheless, 99.9 percent of modellers will find no fault at all.

I ask you; do you need anything more from a reference book?

Recommended.

Thanks to Casemate Publishing UK for the sample [www.casematepublishing.co.uk](http://www.casematepublishing.co.uk)  
**Luke Pitt**







## EURO MODELISMO - ISSUE 250

### ACCION PRESS

This is the first time that I have been introduced to this magazine. I had heard of it and seen cover shots but never the contents inside. On browsing through this issue, my immediate thoughts were, wow, this is fantastic. You have 86 pages of high quality paper bristling with many high grade colour photographs and the well written and descriptive text is presented in English.

Inside this issue are seven articles as follows:

- Char B FCM 1:35, by Javier Redondo
- BA-64B, 1:48 by Joaguin Garcia Gazquez
- Matilda MK4S 1:35 by Cristobal Vergara Duran
- US Cavalry, Vietnam 1968, 1:72 by Sergio Fenoy Cruz
- F-16CJ Block50, 1:32 by Javier Lopez de Anca
- Messerschmitt ME 163B KOMET, 1:32 by Tomas de la Fuente
- Zouave.V.A, Poisson 1866, 54mm by Juan C Avilas Ribi Las

All of these articles are quite comprehensive in both text and photo content, well laid out and to a very high standard. I must say very inspiring. The two stand-outs for me were the Vietnam diorama in 1:72 scale, which on initial site looked as though it was 1:35, and the F-16 with the mind blowing detail put into it.

This is a fantastic magazine, and will keep an eye out for future issues. Very very nice indeed.

Thanks to Accion Press for the sample [www.euromodelismo.com](http://www.euromodelismo.com)  
Highly Recommended.

**Andrew Judson**



## EURO MODELISMO - ISSUE 251

### ACCION PRESS

This is the second issue of this brilliant publication that I have received. I was very impressed with the first and I have to say that this has one not let me down at all either. Like the first, this also is brilliant.

The contents are as follows:

- History of the hobby in Spain Part 1
- After the Blitzkrieg, Poland 1939 1:35 by Carlas de Diego Vaguerizo
- Egyptian M109, 2011 1:35 by Mig Jimenez
- Douglas A-1H Skyraider 1:48 by Juan Villegas
- Albatros D.V 1:32 by Chema Martinez
- General Armistead, Gettysburg 1863 54mm by Luis Gomez Platon

All of these articles are very well written with great photos to compliment, and laid out in a format for one to see how the model was built from start to finish. They are both informative and make you want to hit the bench and start that next project.

I really do like this publication and have thoroughly enjoyed reading this edition. The big stand out for me was the Skyraider....wow, made me want to dig mine out.

A great magazine indeed.

Thanks to Accion Press for the sample [www.euromodelismo.com](http://www.euromodelismo.com)  
Highly Recommended.

**Andrew Judson**





## DRAGON

1:35 SCALE

### WWII GERMAN INFANTRY WEAPONS PART 2 ITEM NO. 3816

This is a re-release of an older Dragon set of German WWII infantry weapons and although they have been around for a while, they are still eminently useful. Two sets of identical sprues contain familiar weapons such as the Kar 98 rifle (although this is fitted with a grenade discharger), StG45, MG34 etc., and a few unusual weapons such as the MP28, Suomi M 1931 and Hungarian M39.

Three types of Panzerfaust are also included; the 30, 30K and 60 plus a Panzerbusche 39 which was also used as an anti-tank weapon. The only thing that the Panzerfausts lack are decals as there were instructions and warnings stenciled on them, however these are available from the aftermarket manufacturer such as Archer or Passion Models.

The back of the box gives you the colours for the weapons with colour call outs from the Mr Hobby and Italeri paint ranges although the front of the box will give you a better idea.

The standard of moulding is good with only a little flash present, which is not surprising given the age of the moulds.

Detail on the weapons is very good.

This set, along with the first one will give you a pretty comprehensive selection of German WW2 weaponry to add to figures, vehicles and dioramas so it comes highly recommended. Recommended.

Thanks to The Hobby Company for the review sample  
[www.hobbyco.net](http://www.hobbyco.net)

Andy King



## DRAGON

1:35 SCALE

### SD.KFZ 234/4 MIT 7.5CM L/48 KIT NO. 6814

Another 'what-if' vehicle, this time a 234/4 armoured car mounting a 7.5cm L/48 gun. The 234/4 did actually have 7.5cm PaK 40 but this particular model was a proposal to mount a higher velocity weapon onto the eight wheeler chassis but the war ended before any went into production.

The base kit is Dragon's 234/3 armed with the short barrelled 7.5cm gun that came out around eight years ago however it's still a great kit and very highly detailed, particularly the suspension. The only new sprue (sprue L) is for the long barrelled 7.5cm gun and associated bits (unless Dragon have taken that from another kit).

Again there is a stack of parts included with a fair few marked as 'not-for-use', clear sprues for the vision blocks, a small fret of etchy bits, an even smaller decal sheet and formed metal wires for the hydraulic brake lines.

As a bit of a bonus you also get the later type fenders that featured two stowage lockers either side, I say bonus as these were only available to purchase separately when the original kits first appeared. The early type of fender with four lockers is also included.

The interior is well detailed and the addition of cabling for the radios should make it look a bit more busy. I would advise taking your time with the suspension as it is quite complicated, also with a bit of work the steering can be altered to position the wheels although be aware that if the front two pairs of wheels turn one way the rear pairs turn opposite. Dragon being the spoilsports that they are these days only include on-vehicle tools with the clamps moulded on, once upon a time they used to give you separate tools so aftermarket etch is the way to go or you could just cheat and make the clamp handles from fuse wire.

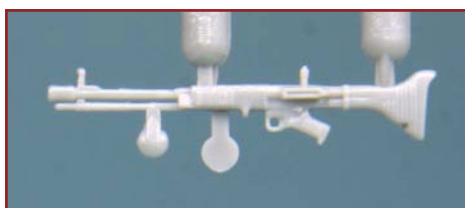
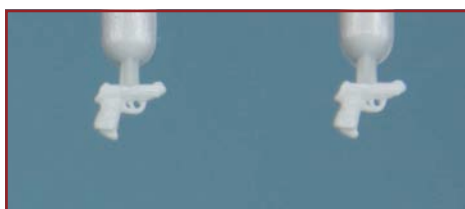
Painting instructions are purely hypothetical, one for a 234 in a three-tone camo scheme and the other is dark yellow and brown, markings are confined to just two crosses and the three-leafed clover emblem.

Well, it's another 'what-if, paper panzer etc' thingy but if you can get hold of the smaller 7.5cm gun or better still sprue L from the original kit or one of Dragons' short barrelled Panzer IV's then it wouldn't be hard to make it into a 234/3 proper. That's what I'm thinking anyway.

Recommended.

Thanks to The Hobby Company for the review sample  
[www.hobbyco.net](http://www.hobbyco.net)

Andy King







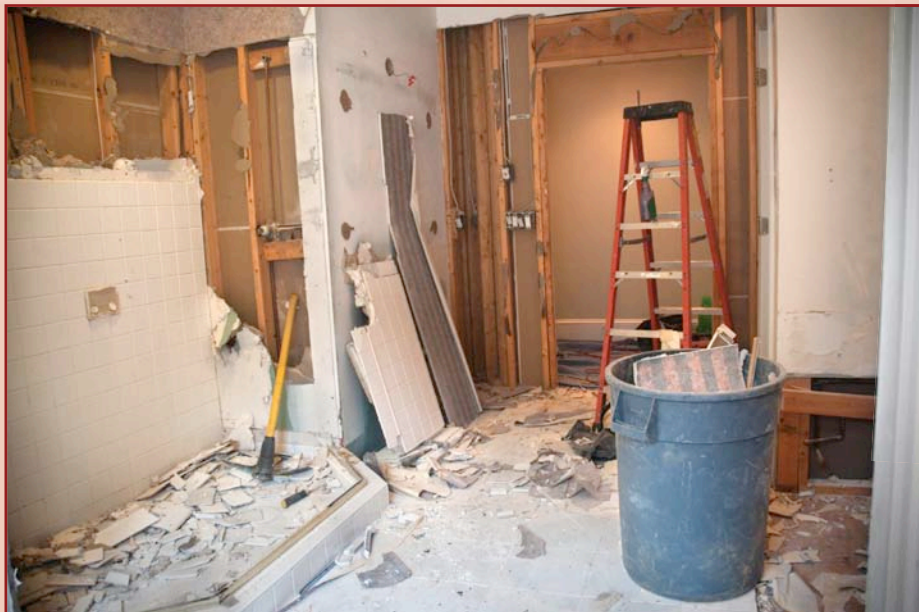




## THE WEEKEND MODELLER

**W**ell brothers and sisters, a new year brings a new set of challenges. Many of us have set goals and one of mine is to do more and worry less. My modelling has been painfully slow over recent months as I've set myself a number of tasks that all relate to home improvement. Painting, building and renovating has been the order of the day in the Pitt household of late. While on holidays, I spent a full month doing what I have been putting off for years. This has had a knock-on effect with what I can achieve modelling-wise. In many ways, I've always considered myself a "weekend modeler" and these recent home renovations have only brought home the fact of how little time I spend at the bench. Sure, I spend a lot of time thinking about what to build, how to build, but actually building something, well that's a whole different ball game.

Honestly, I don't know anyone apart from our Editor that spends more than a few hours over the weekend actually building and painting models. From my standpoint, I spend some of my free time on weekdays thinking and reading about models, but when it comes time to building I can only do a few hours in one sitting. If you sum up the amount of time I spend on actual bench time of building and paint models I'd have to say it's no more than maybe four to maybe five hours a week! I'd be interested to know how much time most of



our readers spend. Write in and tell us. Some parts of the building process can be downright boring, like assembling tracks or filling seams but, by the same token, they can be therapeutic. I know on occasion, I have cranked up the music on the iPod

and just gotten on with these boring jobs. Anyway back to working on the house. After all I am only a weekend modeller after all!

**Until Next Time**  
**Luke Pitt**



### RED ZEBRA

**1:48 SCALE**

**WW2 BRITISH RATION BOXES  
NORTH AFRICAN FOOD SELECTION**

Red Zebra is fast becoming a premier niche stowage manufacture of really well thought out pieces. This month's selection is no exception. The first set is twelve English ration boxes cast in a sand coloured resin. These would be a worthwhile addition to any World War Two British vehicle and given the price, it makes absolutely no sense to do it yourself. The second set consists of five small and three large open topped wooden boxes with various foodstuffs (including apples, pumpkin and loaves of bread) packed into them. Four clay pots are also included with two containing grain and what looks like some sort of fruit, while the other two are empty. I can't endorse these set highly enough. They will add that certain something to any vehicle or diorama they are placed onto. Given the relative low price on these items, you'd be crazy not to add these too your stash. You will use them, I can assure you.

Highly Recommended.  
Thanks go out Red Zebra for samples  
[www.redzebramodels.co.uk](http://www.redzebramodels.co.uk)  
**Luke Pitt**



### HAULER

**1:48 SCALE**

**ITEM NO. HLX48367 - DRAGONS TEETH TANK TRAPS  
ITEM NO. HLX48364 - ALBION 3 POINT FUELLER**

Our friends at Hauler continue to offer us 1:48 scale modellers sensible updates for all the newer releases while also adding their own diorama items to the mix. The first set is eight resin Dragon's Teeth tank traps often seen in photos in Europe during the Second World War.

The casting is flawless as is the concrete cast structure of the units themselves.

The second set is for the Airfix Albion 3 Point Refueler. The radiator surround is included and displays some nice recessed detail including the manufacturer's logo.

The side bonnet screens are also included, which will require some careful bending of the cooling flutes. The windscreen is a complex affair with no less than 14 photo-etched pieces to make it up. The really good thing about this assembly is that it allows you to open the windscreens open and out. Also included are a host of little details. The instructions are quite well done and show precise location instructions.

Recommended.

Thanks to Hauler for the samples [www.hauler.cz](http://www.hauler.cz)

**Luke Pitt**







## TANK MANIA

### 1:48 SCALE T-55 MODEL 1958 • KIT NO. 48-005

Well, it's arrived and let me tell you it was worth the wait.

The T-55 is one of those vehicles that I thought Tamiya would release and in my early set of interviews with modellers that helped shape 1:48 scale armour modelling, almost all had this on their "most wanted" list.

It has often struck me as odd that the market leader has so far failed to release it in plastic.

It is therefore pleasing to report that Tank Mania has now released a kit of this important type and have done so with a lot of style and panache.

The kit consists of 100 or so very well cast resin pieces with the upper and lower hulls cast separately. The amount of detail on these pieces defies belief. The lower hull for example has all of the detail you would expect from a premium 1:35 scale plastic kit, while the upper hull has basically all the details moulded in. It's all there from the integrated mud guards to the fuel lines. The rear drop tanks and side fuel tanks are separate and are marvels of the casting art.

The turret is cast hollow with a bottom plate inserted into it. The turret is a work of art and a further testament to the master builder it is both accurate and detailed beautifully.

The "starfish" road wheels come in two pieces for each assembly and are detailed on both sides.

The tracks are link and length and again are highly detailed.

The barrel has a small piece of wire cast into it (to avoid warpage) and comes complete with the canvas cover.

A medium-sized photo-etched fret is included for the engine screens, grab handles and headlight fittings. I would have liked the engine screens to be finer and the turret grab handles don't really work in this etch form but nevertheless they are a good guide for replacement if you so desire.

A small decal sheet and length of tow rope are also included. The instructions are 3 photocopied sheets of paper that roughly give you an indication of what's in the box and where it should be placed. For someone like me these won't present a problem, but for others (with a lack of reference material) they might. They are basic to the point of being an afterthought. These and the photo etch are the only major gripe that I have with this kit.

Be warned though, the kit is expensive, but by the same token it is highly accurate and will not be bettered in the near future. This kit is probably in my top five best resin 1:48 scale armour kits of all time - not number one mind (that still has to be the Fighting 48th Comet) but in the top five nonetheless.

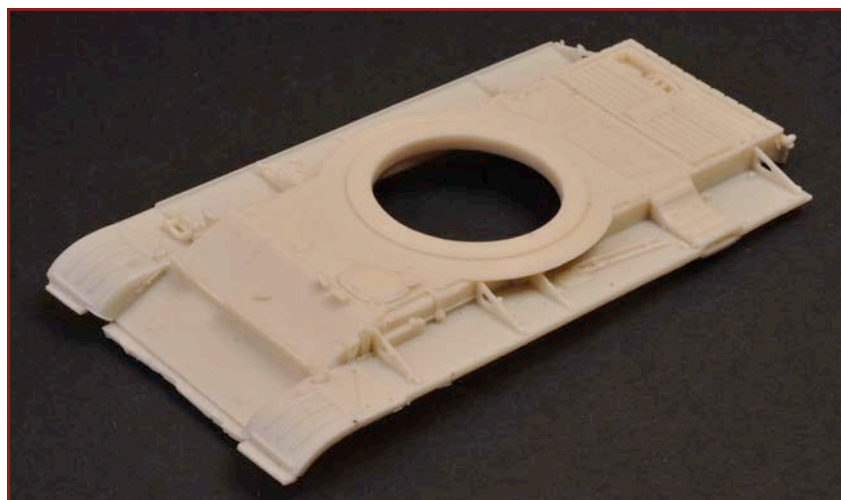
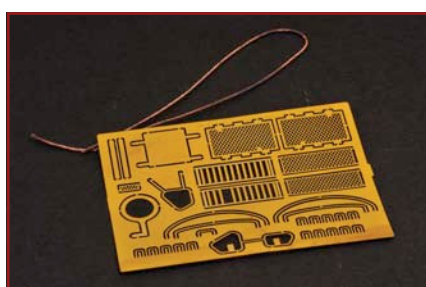
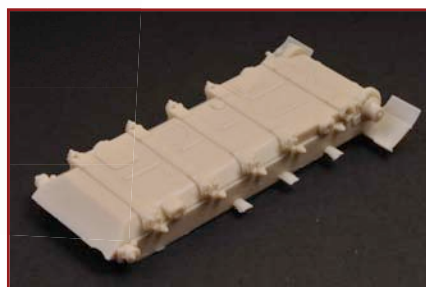
If you want a T-55 in 1:48 scale then this kit will not disappoint. It's just that good.

Highly Recommended.

Thanks to Tank Mania for the sample

[www.tank-mania.com](http://www.tank-mania.com)

**Luke Pitt**





# BUYERS GUIDE>>>>>>>>>

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On sale 3rd  
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## Model MILITARY INTERNATIONAL

ISSUE No.119 March 2016,  
Published February 4th 2016

Editor; Brett Green  
Group Editor; Marcus Nicholls  
Publisher; Alan Harman  
Graphic Design; Alex Hall  
Advertising Manager; Sean Leslie  
Office Manager; Paula Gray  
Administration Manager; Hannah McLaurie  
Administration Assistant; Julie Lane  
MMI Website; ADH Web Team

Printed by;  
Symbian Print Intelligence, Hertfordshire, UK

Distributed by;  
Seymour Distribution  
2 East Poultry Avenue, London, EC1A 9PT  
Tel; 020 7429 4000

Newstrade;  
Select Publisher Services  
3 East Avenue, Bournemouth, BH3 7BW  
Tel; 01202 586848  
Email; tim@selectps.com

Model Military International is published on  
the first Thursday of each month by;  
ADH Publishing, Doolittle Mill, Doolittle Lane,  
Totternhoe, Bedfordshire, LU6 1QX UK  
www.modelmilitary.com  
Tel; +44 (0)1525 222573  
Fax; +44 (0)1525 222574

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## SYRIAN 2S1

Brett Avants presents  
Trumpeter's 1:35 scale 2S1  
Gvozdika in Syrian service.



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### BOXER FROM THE BOX

Andy King does a straight-from-the-box  
build of Revell's 1:35 scale GTK Boxer.

## The Last Success - Operation Südwind

Tamiya's 1:35 FAMO and Dragon's Jagdpanzer IV in a dramatic  
scene by Vladimir Adamec.



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## 2015 MODELLING OUTPUT

Although you are probably reading this in March or even later, I am writing in the first week of the New Year.

I took the opportunity to review my modelling output for 2015. It turns out that more than half of these were military vehicles or figures.

Here is a list of all 21 models:

1. Tamiya 1:35 Char 1B bis (motorised) - January
2. Dragon Black Label 1:35 Saladin Mk.2 plus crew (Firestorm) - February
3. Revell 1:32 Focke-Wulf Fw 190 F-8 - March
4. Tamiya 1:35 Somua S35 - March
5. Tamiya 1:48 Panzerkampfwagen 38(t) - April
6. Tamiya 1:48 German Motorcycle and Sidecar - April
7. Airfix 1:48 Hawker Hurricane Mk.I - April
8. Eduard 1:48 Supermarine Spitfire Mk.VIII - May
9. Tasca 1:35 M4A3E2 Sherman Jumbo - May (incl. 5 figures)
10. Tamiya 1:32 Mosquito FB.VI - July
11. Eduard 1:48 Supermarine Spitfire Mk.XVI - July
12. Tamiya 1:35 Panther Ausf. D - August
13. Tamiya 1:48 Opel Blitz - August
14. Eduard 1:48 Messerschmitt Bf 109 G-6 Royal Class - September
15. AFV Club + Inside the Armour 1:35 Churchill Oke - September
16. Takom 1:35 Whippet Tank - October
17. Airfix 1:72 Beaufighter Mk.X - October
18. Fine Molds 1:72 Messerschmitt Bf 109 G-6 - December
19. Eduard 1:72 Focke-Wulf Fw 190 A-8 - December
20. Tamiya 1:35 M4A3E8 "Easy Eight" Sherman - December
21. Tamiya 1:35 European Theatre US Tank Crew - December





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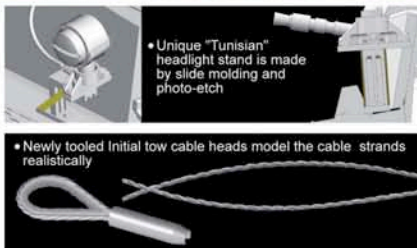
• New authentic-looking Tiger I Initial Production accurately rendered in 1/35 scale



• New antenna case



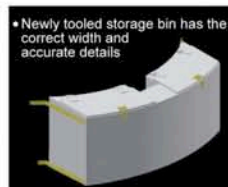
• Fine, accurate detail on hull side panels  
• Includes the round repair patches carried by Tiger "724"



• Unique "Tunisian" headlight stand is made by slide molding and photo-etch  
• Newly tooled Initial tow cable heads model the cable strands realistically



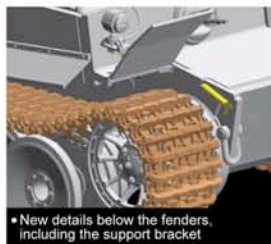
• New initial-type road wheel provided as option



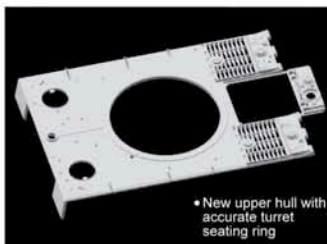
• Newly tooled storage bin has the correct width and accurate details



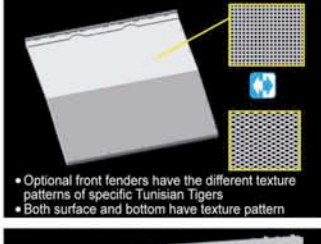
• Three different corner mudguards are included to model specific Tunisian Tigers accurately



• New details below the fenders, including the support bracket



• New upper hull with accurate turret seating ring



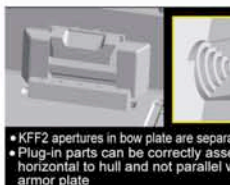
• Optional front fenders have the different texture patterns of specific Tunisian Tigers  
• Both surface and bottom have texture pattern



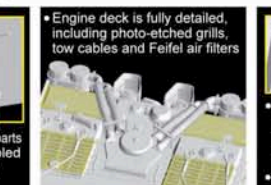
• Photo-etched ribs for the rear fenders include the handles



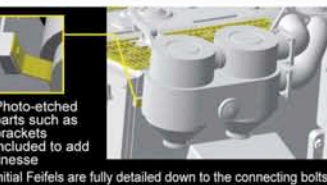
• Side fenders represented by separate panels can model realistic misalignments



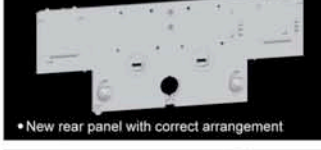
• KFF2 apertures in bow plate are separate parts  
• Plug-in parts can be correctly assembled horizontal to hull and not parallel with armor plate



• Engine deck is fully detailed, including photo-etched grills, tow cables and Feifel air filters



• Photo-etched parts such as brackets included to add finesse  
• Initial Feifels are fully detailed down to the connecting bolts



• New rear panel with correct arrangement



• Accurate reproduction of the Tiger's initial side fender



• Turret roof made by slide-mold



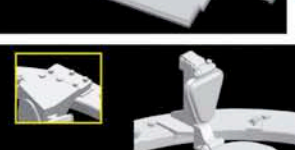
• Newly tooled Initial glacis plate with weld line and the remains of the Vorpanzer gear



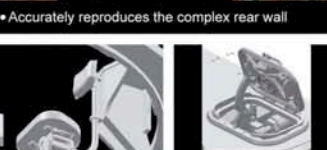
• Accurately reproduces the complex rear wall



• Accurate arrangement of track tool storage box on rear hull



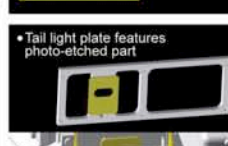
• Two accurately reproduced crew seats inside the turret



• Loader's hatch includes interior detail



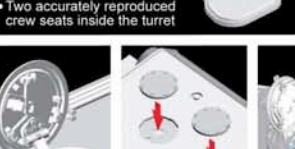
• New mantlet with correct shape and details



• Tail light plate features photo-etched part



• Waterproof-cover hooks for MG made from plastic part



• Hull hatches w/interior detail and optional periscope hoods



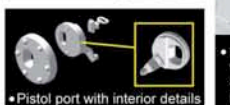
• Hull bottom w/correct drains and hatches for early Tigers



• Turret base has correct details for a Tunisian Tiger



• Outer road wheels can be omitted revealing accurate hub detail



• Pistol port with interior details



• One-piece molded cupola w/vision slits



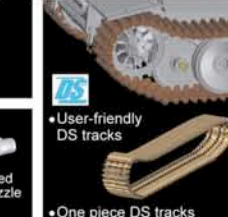
• Interior hull components: fuel tanks, radiators, fans



• Detailed hull MG w/mounting frame, ammunition bag and telescope



• Accurately detailed slide molded muzzle brake



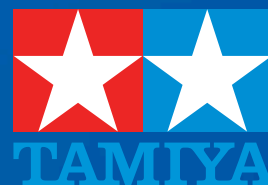
• User-friendly DS tracks

• One piece DS tracks



**1/35**  
SCALE

**U.S. TANK CREW SET**  
(EUROPEAN THEATER)



★Tank model sold separately.

# Getting Things Ready

**1/35 Military Miniature Series U.S. Tank Crew Set (European Theater)** (Item 35347)

From the Battle of the Bulge to the crossing of the Rhine, U.S. tank crews had a vital role to play as WWII wound to a close. Now, Tamiya has used the latest molding technology to create this incredibly realistic 1/35 scale 6-figure set which portrays one such crew in relaxed mood, working in and around their vehicle. It features commander, driver, gunner figures and more, in typical WWII European Theater uniform. Why not combine this versatile set with one of the U.S. tank models from our famed 1/35 Military Miniature Series line, such as the new M4A3E8 Easy Eight European Theater?

★Highly detailed set contains 4 full-body & 2 torso tank crew figures plus a range of accessories. ★Clear parts are included to create 3 types of goggles (2 of each). ★Parts to recreate M3A1 submachine gun and other accessories are also included, as are decals to depict unit and rank insignia, plus ammo case markings.



**Also on sale!**

**1/35 Military Miniature Series  
U.S. Medium Tank M4A3E8 Sherman "Easy Eight"  
European Theater** (Item 35346)

## Selected 1/35 scale U.S. subjects available from Tamiya

Tamiya offers any number of candidates to partner this figure set, including a large variety of different M4 Sherman variants, in addition to the 90mm gun-toting M26 Pershing and a whole host of other vehicles!



**U.S. Medium Tank M4 Sherman (Early Production)**  
(Item 35190)



**U.S. Medium Tank M4A3 Sherman 105mm  
Howitzer (Assault Support)** (Item 35251)



**U.S. Medium Tank M26 Pershing (T26E3)**  
(Item 35254)